

Arlington High School Building Committee

Meeting Date: Tuesday, August 18, 6:00 pm
Location: Conducted via Remote Participation

Agenda

1. Cost Estimate Review
2. Value Engineering Discussion
3. Project Schedule Updates/Discussion
4. Subcommittee Reports
 - ◆ Communications
 - ◆ Finance
 - ◆ Interiors
 - ◆ Landscape & Exteriors
 - ◆ Memorials
 - ◆ SMEPFP
 - ◆ Security
 - ◆ Temp Use-Phasing
5. Approval of Minutes
 - ◆ Minutes of August 4, 2020
6. New Business

The listings of matters are those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Members of the public are asked to send written comment to ktassone@arlington.k12.ma.us. Documents regarding agenda items will be made available via the Town's website.

<https://www.mass.gov/doc/open-meeting-law-order-march-12-2020/download>

Topic: AHSBC Meeting

Time: Aug 18, 2020 06:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://town-arlington-ma-us.zoom.us/j/97763214194>

Meeting ID: 977 6321 4194

One tap mobile

+13126266799,,97763214194# US (Chicago)

+16468769923,,97763214194# US (New York)

Dial by your location

+1 312 626 6799 US (Chicago)

+1 646 876 9923 US (New York)

+1 301 715 8592 US (Germantown)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 977 6321 4194

Find your local number: <https://town-arlington-ma-us.zoom.us/j/advlMm7pvg>

COST ESTIMATE COMPARISON SPREADSHEET (UNIFORMAT)

Arlington High School New Construction

| Division # | Description | Project Funding Agreement (PFA) | | Design Development | | 60% CD | | 90% CD | | PFA / 90% CD Comparison | | |
|------------|--|---------------------------------|--------------|----------------------|--------------|----------------------|-----------------|----------------------|-----------------|-------------------------|------------------------|-----------------|
| | | Total Cost | Unit Cost | Total Cost | Unit Cost | Total Cost | Unit Cost | Total Cost | Unit Cost | GSF | Total Cost | Unit Cost |
| A | Substructure | \$13,474,721 | \$33 | \$18,977,007 | \$46 | \$18,984,105 | \$46 | \$18,942,743 | \$46 | 408,590 | (\$5,468,022) | -\$13 |
| B | Shell | | | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| B10 | Superstructure | \$21,791,712 | \$53 | \$19,022,804 | \$47 | \$19,748,189 | \$48 | \$20,647,741 | \$51 | 408,590 | \$1,143,971 | \$3 |
| B20 | Exterior Enclosure | \$21,017,633 | \$51 | \$17,231,183 | \$42 | \$19,022,994 | \$47 | \$18,274,602 | \$45 | 408,590 | \$2,743,031 | \$7 |
| | B2010 Exterior Walls | | \$0 | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| | B2020 Exterior Windows | | \$0 | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| | B2030 Exterior Doors | | \$0 | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| B30 | Roofing | \$4,588,033 | \$11 | \$3,463,555 | \$8 | \$3,520,290 | \$9 | \$3,541,004 | \$9 | 408,590 | \$1,047,029 | \$3 |
| C | Interiors | \$30,023,786 | \$73 | \$30,403,764 | \$74 | \$34,416,308 | \$84 | \$32,197,400 | \$79 | 408,590 | (\$2,173,614) | -\$5 |
| D | Services | | | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| | D10 Conveying | \$615,000 | \$2 | \$724,500 | \$2 | \$724,500 | \$2 | \$724,500 | \$2 | 408,590 | (\$109,500) | \$0 |
| | D20 Plumbing | \$6,656,440 | \$16 | \$5,040,764 | \$12 | \$5,074,350 | \$12 | \$5,404,862 | \$13 | 408,590 | \$1,251,578 | \$3 |
| | D30 HVAC | \$25,607,633 | \$63 | \$29,694,566 | \$73 | \$27,706,658 | \$68 | \$28,655,140 | \$70 | 408,590 | (\$3,047,507) | -\$7 |
| | D40 Fire Protection | \$2,042,950 | \$5 | \$2,871,272 | \$7 | \$2,773,033 | \$7 | \$2,769,818 | \$7 | 408,590 | (\$726,868) | -\$2 |
| | D50 Electrical | \$14,377,110 | \$35 | \$16,960,299 | \$42 | \$18,990,613 | \$46 | \$19,433,600 | \$48 | 408,590 | (\$5,056,490) | -\$12 |
| E | Furnishings & Fixed Equipment | \$5,844,282 | \$14 | \$3,819,749 | \$9 | \$4,779,189 | \$12 | \$4,959,853 | \$12 | 408,590 | \$884,429 | \$2 |
| | Building Subtotal | \$146,039,300 | \$357 | \$148,209,463 | \$363 | \$155,740,229 | \$381.17 | \$155,551,263 | \$380.70 | 408,590 | -\$9,511,963 | -\$23.28 |
| F | Special Construction & Demo | \$7,414,100 | \$18 | \$9,715,375 | \$24 | \$6,960,559 | \$17 | \$10,682,273 | \$26 | 408,590 | (\$3,268,173) | -\$8 |
| G | Other Site Construction | | \$0 | | \$0 | | \$0 | | \$0 | 408,590 | | \$0 |
| | G10 Site Preparation | \$5,704,532 | \$14 | \$5,561,699 | \$14 | \$5,960,156 | \$15 | \$5,997,114 | \$15 | 408,590 | (\$292,582) | -\$1 |
| | G20 Site Improvements | \$8,712,200 | \$21 | \$8,016,247 | \$20 | \$8,809,874 | \$22 | \$9,111,743 | \$22 | 408,590 | (\$399,543) | -\$1 |
| | G30 Mechanical Utilities | \$1,548,710 | \$4 | \$6,126,592 | \$15 | \$3,366,036 | \$8 | \$3,537,453 | \$9 | 408,590 | (\$1,988,743) | -\$5 |
| | G40 Electrical Utilities | \$2,660,200 | \$7 | \$2,263,749 | \$6 | \$2,971,071 | \$7 | \$2,792,687 | \$7 | 408,590 | (\$132,487) | \$0 |
| T | Toilet Building (Separated in DD only) | | | \$444,185 | | | | | | | | |
| | Subtotal | \$172,079,042 | \$421 | \$180,337,308 | \$441 | \$183,807,925 | \$450 | \$187,672,531 | \$459 | 408,590 | (\$359,751,573) | -\$880 |
| Z | Mark-Ups | \$47,720,671 | 28% | \$43,462,837 | 24% | \$41,782,886 | 23% | \$38,398,010 | 20% | 408,590 | \$9,322,661 | -3% |
| Z | GMP Insurance | \$2,214,657 | 1% | \$2,957,623 | 2% | \$2,588,155 | 1% | \$2,588,155 | 1% | 408,590 | -\$373,498 | 0% |
| Z | GC Bonds | \$1,509,994 | 1% | \$3,441,278 | 2% | \$3,420,947 | 2% | \$3,456,785 | 2% | 408,590 | -\$1,946,791 | 1% |
| Z | Design & Phasing Contingency | \$13,766,323 | 29% | \$9,028,780 | 21% | \$8,271,357 | 20% | \$4,649,006 | 12% | 408,590 | \$9,117,317 | 98% |
| Z | General Conditions & General Req. | \$18,493,299 | 11% | \$16,804,112 | 9% | \$16,804,112 | 9% | \$16,804,112 | 9% | 408,590 | \$1,689,187 | 0% |
| Z | GMP Contingency | \$6,706,513 | 4% | \$6,525,307 | 4% | \$5,992,578 | 3% | \$5,594,215 | 3% | 408,590 | \$1,112,298 | 0% |
| Z | Overhead & Profit | \$5,029,885 | 3% | \$4,705,737 | 3% | \$4,705,737 | 3% | \$4,705,737 | 3% | 408,590 | \$324,148 | 0% |
| | COVID GR Impacts (90% CD Only) | | | | | | | \$600,000 | 2% | 408,590 | \$600,000 | 6% |
| | Construction Subtotal | \$219,799,713 | \$538 | \$223,800,145 | \$548 | \$225,590,811 | \$552 | \$226,070,541 | \$553 | 408,590 | (\$6,270,828) | -\$15 |
| Z | Escalation to Construction Mid-Point | \$15,487,114 | 9.0% | \$11,486,682 | 6.4% | \$9,662,427 | 5% | \$7,998,012 | 4% | 408,590 | \$7,489,102 | -2% |
| | Total Addition Cost | \$235,286,827 | | \$235,286,827 | | \$235,253,238 | | \$234,068,553 | | 408,590 | \$1,218,274 | |
| | \$/GSF | \$576 | | \$576 | | \$576 | | \$573 | | | \$3 | |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|----------------------------------|-----------------------|--------------------|-------------------|
| A Substructure | | | |
| A10 Foundations | | | |
| A1010 Standard Foundations | 408,500.00 gsf | 16.35 /gsf | 6,679,254 |
| A1020 Special Foundations | 408,500.00 gsf | 15.57 /gsf | 6,359,839 |
| A1030 Lowest Floor Construction | 408,500.00 gsf | 14.45 /gsf | 5,903,650 |
| A10 Foundations | 408,500.00 gsf | 46.37 /gsf | 18,942,743 |
| A Substructure | 408,500.00 gsf | 46.37 /gsf | 18,942,743 |
| B Shell | | | |
| B10 Superstructure | | | |
| B1010 Floor Construction | 408,500.00 gsf | 46.39 /gsf | 18,948,477 |
| B1020 Roof Construction | 408,500.00 gsf | 4.16 /gsf | 1,699,264 |
| B10 Superstructure | 408,500.00 gsf | 50.55 /gsf | 20,647,741 |
| B20 Exterior Enclosure | | | |
| B2010 Exterior Walls | 408,500.00 gsf | 28.90 /gsf | 11,804,407 |
| B2020 Exterior Windows | 408,500.00 gsf | 15.10 /gsf | 6,168,995 |
| B2030 Exterior Doors | 408,500.00 gsf | 0.74 /gsf | 301,200 |
| B20 Exterior Enclosure | 408,500.00 gsf | 44.74 /gsf | 18,274,602 |
| B30 Roofing | | | |
| B3010 Roof Coverings | 408,500.00 gsf | 7.93 /gsf | 3,240,185 |
| B3020 Roof Openings | 408,500.00 gsf | 0.74 /gsf | 300,819 |
| B30 Roofing | 408,500.00 gsf | 8.67 /gsf | 3,541,004 |
| B Shell | 408,500.00 gsf | 103.95 /gsf | 42,463,347 |
| C Interiors | | | |
| C10 Interior Construction | | | |
| C1010 Partitions | 408,500.00 gsf | 27.75 /gsf | 11,335,383 |
| C1020 Interior Doors | 408,500.00 gsf | 5.32 /gsf | 2,171,830 |
| C1030 Specialties/Millwork | 408,500.00 gsf | 9.78 /gsf | 3,994,303 |
| C10 Interior Construction | 408,500.00 gsf | 42.84 /gsf | 17,501,515 |
| C20 Stairs | | | |
| C2010 Stair Construction | 408,500.00 gsf | 3.53 /gsf | 1,441,844 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|--------------------|-------------------|
| C2020 Stair Finishes | 408,500.00 gsf | 1.10 /gsf | 450,320 |
| C20 Stairs | 408,500.00 gsf | 4.63 /gsf | 1,892,164 |
| C30 Interior Finishes | | | |
| C3010 Wall Finishes | 408,500.00 gsf | 9.65 /gsf | 3,942,731 |
| C3020 Floor Finishes | 408,500.00 gsf | 8.83 /gsf | 3,607,873 |
| C3030 Ceiling Finishes | 408,500.00 gsf | 12.86 /gsf | 5,253,116 |
| C30 Interior Finishes | 408,500.00 gsf | 31.34 /gsf | 12,803,720 |
| C Interiors | 408,500.00 gsf | 78.82 /gsf | 32,197,400 |
| D Services | | | |
| D10 Conveying Systems | | | |
| D1010 Elevators & Lifts | 408,500.00 gsf | 1.77 /gsf | 724,500 |
| D10 Conveying Systems | 408,500.00 gsf | 1.77 /gsf | 724,500 |
| D20 Plumbing | | | |
| D20 Plumbing | 408,500.00 gsf | 12.94 /gsf | 5,285,962 |
| D2090 Plumbing EBP #2 | 408,500.00 gsf | 0.29 /gsf | 118,900 |
| D20 Plumbing | 408,500.00 gsf | 13.23 /gsf | 5,404,862 |
| D30 Heating, Ventilating, and Air Conditioning (HVAC) | | | |
| D30 HVAC | 408,500.00 gsf | 70.15 /gsf | 28,655,140 |
| D30 Heating, Ventilating, and Air Conditioning (HVAC) | 408,500.00 gsf | 70.15 /gsf | 28,655,140 |
| D40 Fire Protection Systems | | | |
| D40 Fire Protection | 408,500.00 gsf | 6.47 /gsf | 2,644,818 |
| D4010 FP - Early Bid Package #2 | 408,500.00 gsf | 0.31 /gsf | 125,000 |
| D40 Fire Protection Systems | 408,500.00 gsf | 6.78 /gsf | 2,769,818 |
| D50 Electrical Systems | | | |
| D50 Electrical | 408,500.00 gsf | 47.57 /gsf | 19,433,600 |
| D50 Electrical Systems | 408,500.00 gsf | 47.57 /gsf | 19,433,600 |
| D Services | 408,500.00 gsf | 139.51 /gsf | 56,987,920 |

E Equipment & Furnishings

E10 Equipment

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| E10 Equipment General | 408,500.00 gsf | 7.31 /gsf | 2,987,461 |
| E10 Equipment | 408,500.00 gsf | 7.31 /gsf | 2,987,461 |
| E20 Furnishings | | | |
| E2010 Fixed Furnishings | 408,500.00 gsf | 4.83 /gsf | 1,972,392 |
| E20 Furnishings | 408,500.00 gsf | 4.83 /gsf | 1,972,392 |
| E Equipment & Furnishings | 408,500.00 gsf | 12.14 /gsf | 4,959,853 |
| F Special Construction & Demolition | | | |
| F10 Special Construction | | | |
| F10 Temporary Construction | | /gsf | 2,945,910 |
| F10 EB#3 Summer 2020 Swing Space EBP#3 | | | 845,288 |
| F10 Special Construction | | /gsf | 3,791,198 |
| F20 Existing Building Demolition | | | |
| F2010 Building Elements Demolition | 408,500.00 gsf | 7.41 /gsf | 3,027,125 |
| F20 Existing Building Demolition | 408,500.00 gsf | 7.41 /gsf | 3,027,125 |
| F23 Asbestos Containing Floor Material | | | |
| F2020 Hazardous Component Abatement | 408,500.00 gsf | 9.46 /gsf | 3,863,950 |
| F23 Asbestos Containing Floor Material | 408,500.00 gsf | 9.46 /gsf | 3,863,950 |
| F Special Construction & Demolition | 408,500.00 gsf | 26.15 /gsf | 10,682,273 |
| G Sitework | | | |
| G10 Site Preparation | | | |
| F10 Temporary Construction | 408,500.00 gsf | 0.45 /gsf | 184,330 |
| G10 Site Preparation | 408,500.00 gsf | 14.23 /gsf | 5,812,784 |
| G10 Site Preparation | 408,500.00 gsf | 14.68 /gsf | 5,997,114 |
| G20 Site Improvements | | | |
| G20 Site Improvements | 408,500.00 gsf | 22.31 /gsf | 9,111,743 |
| G20 Site Improvements | 408,500.00 gsf | 22.31 /gsf | 9,111,743 |
| G30 Site Civil/Mechanical Utilites | | | |
| G30 Civil Mechanical Utilities | 408,500.00 gsf | 2.90 /gsf | 1,182,453 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|-------------------|
| G3005 Enabling Utilities | 408,500.00 | 4.80 | 1,960,000 |
| G3010 Water Supply | 408,500.00 gsf | 0.38 /gsf | 155,000 |
| G3020 Sanitary Sewer | 408,500.00 gsf | 0.14 /gsf | 55,000 |
| G3030 Storm Drainage | 408,500.00 gsf | 0.34 /gsf | 140,000 |
| G3040 Heating Distribution | 408,500.00 gsf | 0.11 /gsf | 45,000 |
| G30 Site Civil/Mechanical Utilites | 408,500.00 gsf | 8.66 /gsf | 3,537,453 |
| G40 Site Electrical Utilities | | | |
| G40 Electrical Utilities | 408,500.00 gsf | 6.84 /gsf | 2,792,687 |
| G40 Site Electrical Utilities | 408,500.00 gsf | 6.84 /gsf | 2,792,687 |
| G Sitework | 408,500.00 gsf | 52.48 /gsf | 21,438,997 |

90% CD Estimate

MSBA Project # 2015-0010-0505

Estimate Totals

| Description | Amount | Totals | Rate | Cost per Unit |
|--|--------------------|--------------------|-------------|----------------------|
| Subtotal | 187,672,531 | 187,672,531 | | 459.419 /SF |
| Non-trade sub bonds | 1,205,090 | | 1.200 % | 2.950 /SF |
| Subtotal | 1,205,090 | 188,877,621 | | 462.369 /SF |
| Phasing | 650,000 | | | 1.591 /SF |
| Design/Estimate Contingency-Awarded Subs | | | | |
| Design & Estimating Contingency - Other | 3,999,006 | | 2.500 % | 9.789 /SF |
| Subtotal | 4,649,006 | 193,526,627 | | 473.749 /SF |
| Escalation - Awarded Subs | | | | |
| Escalation - Other | 7,998,012 | | 5.000 % | 19.579 /SF |
| Subtotal | 7,998,012 | 201,524,639 | | 493.328 /SF |
| General Conditions (C.1-3) | 11,931,225 | | | 29.207 /SF |
| General Requirements (C.5-6) | 4,872,887 | | | 11.929 /SF |
| Covid GR Impact Costs | 600,000 | | | 1.469 /SF |
| P&P Bond | 2,251,695 | | | 5.512 /SF |
| Builder's Risk (NIC) | | | | |
| GL Insurance | 2,588,155 | | | 6.336 /SF |
| Subtotal | 22,243,962 | 223,768,601 | | 547.781 /SF |
| Contractor's Contingency | 5,594,215 | | 2.500 % | 13.695 /SF |
| Fee | 4,705,737 | | | 11.520 /SF |
| Total | | 234,068,553 | | 572.995 /SF |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|---------------------|------------------|
| A Substructure | | | |
| A10 Foundations | | | |
| A1010 Standard Foundations | | | |
| 033010 Concrete Adjustments | | | |
| Adjust to Sub Pricing (\$9,223,508) | 1.00 ls | 232,415.00 /ls | 232,415 |
| Credit for 100% of design contingency | (2.50) % | 92,236.77 /% | (230,592) |
| Credit for escalation contingency | (5.00) % | 92,236.76 /% | (461,184) |
| 033010 Concrete Adjustments | | | (459,361) |
| 033028 Concrete - Cont Ftgs | | | |
| Concrete Riggs ftgs, walls, grade beams | 1.00 ls | 1,900,000.00 /ls | 1,900,000 |
| Form/place/strip continuous footings - 26x12 - 45' | 90.00 sfca | 15.88 /sfca | 1,429 |
| Form/place/strip continuous footings - 36x12 - 147' | 294.00 sfca | 15.88 /sfca | 4,668 |
| Form/place/strip continuous footings - 48x12 - 70' | 140.00 sfca | 15.88 /sfca | 2,223 |
| Form/place/strip continuous footings - 36x12 - 147' | 565.00 sfca | 15.88 /sfca | 8,971 |
| Form/place/strip continuous footings - 48x12 - 70' | 1,565.00 sfca | 15.88 /sfca | 24,849 |
| Ready-mix - continuous footings (3000 psi) | 15.79 cy | 198.22 /cy | 3,130 |
| Placing concrete - cont footing | 15.79 cy | 133.46 /cy | 2,107 |
| 033028 Concrete - Cont Ftgs | 304.00 cy | 6,405.85 /cy | 1,947,378 |
| 033029 Concrete - Walls | | | |
| Form/place/strip fnd walls - 12"x 16.0' - 50' | 1,550.00 sfca | 22.50 /sfca | 34,868 |
| Form/place/strip fnd walls - 12"x 22.0' - 75' | 3,350.00 sfca | 22.50 /sfca | 75,361 |
| Rebar at walls (180#/cy) | 8.55 ton | 3,180.93 /ton | 27,197 |
| Placing concrete | 95.00 cy | 133.46 /cy | 12,679 |
| Ready-mix - walls (3000 psi) no waste | 91.00 cy | 198.22 /cy | 18,038 |
| Ready-mix - pilaster (3000 psi) | 4.00 cy | 198.22 /cy | 793 |
| 033029 Concrete - Walls | 738.00 cy | 228.91 /cy | 168,935 |
| 033030 Concrete - Spread Footings | | | |
| F7 Form/place/strip spread footings - 5 ea | 308.00 sfca | 21.18 /sfca | 6,522 |
| F10BR Form/place/strip spread footings - 1 ea | 120.00 sfca | 21.17 /sfca | 2,541 |
| F8 RI Form/place/strip spread footings - 1 ea | 91.20 sfca | 21.17 /sfca | 1,931 |
| Form/place/strip - elev pit footing - 9'x8' x 16" x2 | 90.71 sfca | 21.17 /sfca | 1,921 |
| Ready-mix - column footings (3000 psi) no waste | 33.95 cy | 198.22 /cy | 6,729 |
| Placing concrete - column ftg | 33.95 cy | 133.46 /cy | 4,531 |
| 033030 Concrete - Spread Footings | 848.00 cy | 28.51 /cy | 24,175 |
| 033031 Concrete - Grade Beams - Int | | | |
| Form/place/strip grade beam - 24x 42" - Ph2&3 - 1,392 | 9,744.00 sfca | 22.50 /sfca | 219,198 |
| Rebar at grade beam (75#/lf) - ph 2,3 | 60.53 ton | 3,180.93 /ton | 192,542 |
| Placing concrete - ph 2,3 | 396.00 cy | 133.46 /cy | 52,849 |
| Ready-mix - grade beam (3000 psi) no waste - ph 2,3 | 396.00 cy | 198.22 /cy | 78,494 |
| 033031 Concrete - Grade Beams - Int | 396.00 cy | 1,371.42 /cy | 543,083 |
| 033032 Concrete - Grade Beams and Pilasters - Ext | | | |
| Form/place/strip ext grade beams- 12x6.0' - 205' | 2,435.00 sfca | 22.50 /sfca | 54,777 |
| Form/place/strip ext grade beams- 16x28.5' - 20' | 1,105.00 sfca | 22.50 /sfca | 24,858 |
| Form/place/strip ext grade beams - 18x6.6' - 65' | 870.00 sfca | 22.50 /sfca | 19,571 |
| Form/place/strip ext grade beams - 20x25.0' - 290' | 14,515.00 sfca | 22.50 /sfca | 326,523 |
| Form/place/strip ext grade beams - 24x4.5' - 1,250' | 11,280.00 sfca | 22.50 /sfca | 253,756 |
| Form/place/strip ext grade beams - 24x5.5' - 85' | 900.00 sfca | 22.50 /sfca | 20,246 |
| Form/place/strip ext grade beams - 24x6.5' - 75' | 980.00 sfca | 22.50 /sfca | 22,046 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|---------------------|------------------|
| 033032 Concrete - Grade Beams and Pilasters - Ext | | | |
| Form/place/strip ext grade beams - 48x5.0' - 85' | 850.00 sfca | 22.50 /sfca | 19,122 |
| Add for pilasters - 24x24 (19/24' 60/3') | 612.00 lf | 59.56 /lf | 36,450 |
| Rebar at high wall (10#/sf at basement walls) | 75.79 ton | 3,180.93 /ton | 241,076 |
| Rebar at perimeter grade beam (90#/lf at frost locations) | 80.52 ton | 3,180.93 /ton | 256,116 |
| Rebar at pilasters (50#/lf) | 17.73 ton | 3,180.93 /ton | 56,398 |
| Placing concrete | 1,185.00 cy | 133.46 /cy | 158,148 |
| Ready-mix - grade beams (3000 psi) no waste | 1,094.00 cy | 198.22 /cy | 216,848 |
| Ready-mix - pilaster (3000 psi) | 91.00 cy | 198.22 /cy | 18,038 |
| 033032 Concrete - Grade Beams and Pilasters - Ext | 1,185.00 cy | 1,454.83 /cy | 1,723,973 |
| 033034 Concrete - Ph 2,3 Pile Caps | | | |
| Pile cap 1 - 75 ea | 4,200.00 sfca | 21.17 /sfca | 88,932 |
| Pile cap 2 - 120 ea | 10,560.00 sfca | 21.18 /sfca | 223,603 |
| Pile cap 3 - 44 ea | 5,280.00 sfca | 21.18 /sfca | 111,802 |
| Pile cap 3SP - 1 ea | 136.00 sfca | 21.17 /sfca | 2,880 |
| Pile cap 4 - 15 ea | 1,920.00 sfca | 21.17 /sfca | 40,655 |
| Pile cap 5 - 1 ea | 147.00 sfca | 21.17 /sfca | 3,113 |
| Pile cap 5SP - 3 ea | 504.00 sfca | 21.17 /sfca | 10,672 |
| Rebar per quote | 90.00 ton | 2,972.84 /ton | 267,555 |
| Redimix - Pile caps (3000 psi) no waste | 1,173.00 cy | 198.22 /cy | 232,507 |
| Placing concrete - pile cap | 1,173.00 cy | 133.46 /cy | 156,546 |
| 033034 Concrete - Ph 2,3 Pile Caps | 1,173.00 cy | 970.39 /cy | 1,138,265 |
| 033094 Concrete - Toilet Bldg | | | |
| Form/place/strip ext grade beams - 24" x 36' | 120.00 lf | 19.13 /lf | 2,295 |
| Rebar at grade beam (25#/lf) | 1.50 ton | 3,064.77 /ton | 4,597 |
| Ready-mix - grade beams (3000 psi) | 26.67 cy | 190.98 /cy | 5,093 |
| Concrete pumping - foundations | 1.00 day | 2,125.15 /day | 2,125 |
| 033094 Concrete - Toilet Bldg | | /gsf | 14,111 |
| 070001 Waterproofing, Caulking | | | |
| Sheet waterproofing with drainage board at high walls only | 12,176.00 sf | 8.50 /sf | 103,496 |
| Sheet waterproofing with drainage board - add for footing | 3,054.00 sf | 8.50 /sf | 25,959 |
| 070001 Waterproofing, Caulking | 15,230.00 gsf | 8.50 /gsf | 129,455 |
| 071100 Bituminous Dampproofing | | | |
| Dampproofing at frost walls, no drainage bd | | /sf | |
| 071100 Bituminous Dampproofing | 20,024.00 gsf | /gsf | |
| 072100 Thermal Insulation | | | |
| Rigid insulation at perimeter walls (2.0' at frost walls, 10.0' at basement walls) | 9,000.00 sf | 3.50 /sf | 31,500 |
| 072100 Thermal Insulation | 12,500.00 gsf | 2.52 /gsf | 31,500 |
| 312002 Earth Moving within Building Footprint | | | |
| Localized dewatering - ph 2-4 | 1.00 ls | 140,000.00 /ls | 140,000 |
| Site Derenzo - Phase 1 building e/b | 1.00 ls | 960,000.00 /ls | 960,000 |
| E/b foundation walls/footings (F2.2C & F5.0C) - perimeter - ph 2-3 | 1,727.00 lf | 46.15 /lf | 79,692 |
| Excavate/backfill foundation Grade Beams - ph 2-3 | 3,850.00 lf | 46.15 /lf | 177,658 |
| Excavate for pile caps - ph 2,3 | 244.00 ea | 247.50 /ea | 60,390 |
| 312002 Earth Moving within Building Footprint | 147,030.00 gsf | 9.64 /gsf | 1,417,741 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|----------------------|------------------|
| A1010 Standard Foundations | 408,500.00 gsf | 16.35 /gsf | 6,679,254 |
| A1020 Special Foundations | | | |
| 010200 Allowances | | | |
| Allowance for premiums due to existing piles | 1.00 allw | 100,000.00 /allw | 100,000 |
| 010200 Allowances | 408,500.00 gsf | 0.25 /gsf | 100,000 |
| 033087 Concrete Deadman for SOE | | | |
| Concrete Riggs Deadman | 1.00 ls | 300,000.00 /ls | 300,000 |
| 033087 Concrete Deadman for SOE | | | 300,000 |
| 033089 Concrete Wall at SOE | | | |
| Concrete wall - conc 4000# - 12" | 101.11 cy | 190.71 /cy | 19,282 |
| Concrete wall - sngl sided form - 195' x 14 | 2,730.00 sf | 45.67 /sf | 124,673 |
| Concrete wall - rebar #6 x 4 | 15.00 tn | 3,068.86 /tn | 46,033 |
| Concrete wall - place concrete | 101.00 cy | 132.62 /cy | 13,395 |
| 033089 Concrete Wall at SOE | 294.67 cy | 690.20 /cy | 203,382 |
| 071300 Fluid Applied Waterproofing (vapor membrane) | | | |
| 6 mil reinforced poly | 912.00 sf | 0.60 /sf | 547 |
| 071300 Fluid Applied Waterproofing (vapor membrane) | 142,402.00 gsf | 0.00 /gsf | 547 |
| 312115 Sub-Slab Ventilation System | | | |
| Vapor Mitigation membrane - 40 dry mils covered with a G1000 protection fabric - ph 1 | 59,000.00 sf | 4.15 /sf | 244,850 |
| Vapor Mitigation membrane - 40 dry mils covered with a G1000 protection fabric - ph 2 & 3 | 88,030.00 sf | 4.15 /sf | 365,325 |
| Flat vent for vapor mitigation - phase 1 | 2,505.00 lf | 20.00 /lf | 50,100 |
| Flat vent for vapor mitigation - ph 2 & 3 | 3,190.00 lf | 20.00 /lf | 63,800 |
| 312115 Sub-Slab Ventilation System | 147,030.00 gsf | 4.93 /gsf | 724,075 |
| 315000 Temporary Excavation Support and Protection | | | |
| Site Derenzo ph 1 -SOE East/West of permanent SOE - 200' x 12' | 4,800.00 sf | 100.00 /sf | 480,000 |
| 315000 Temporary Excavation Support and Protection | 4,800.00 gsf | 100.00 /gsf | 480,000 |
| 316213 Pressure Injected Footings (PIFs) | | | |
| PIF - 120 ton at pile caps (74 +118x2 +46x3 +16x4 +4x5) | 532.00 ea | 3,678.26 /ea | 1,956,834 |
| Mobilization - 3 riggs | 0.00 ls | 0.00 /ls | 0 |
| Load tests (1 static, 2 dynamic) | 1.00 ls | /ls | |
| 316213 Pressure Injected Footings (PIFs) | 502.00 gsf | 3,898.08 /gsf | 1,956,834 |
| 316600 Aggregate Piers & Rigid Inclusions | | | |
| Site Derenzo ph 1- Aggregat piers and rigid inclusions | 58,000.00 sf | 22.00 /sf | 1,276,000 |
| 316600 Aggregate Piers & Rigid Inclusions | 31,800.00 gsf | 40.13 /gsf | 1,276,000 |
| 316615 Helical Piles | | | |
| Heical piles at toilet Building - 10 ton | 28.00 ea | 2,800.00 /ea | 78,400 |
| Heical piles cut-offs at toilet Building | 28.00 ea | 200.00 /ea | 5,600 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|------------------|
| 316615 Helical Piles | | /gsf | 84,000 |
| 316616 Permanent Soldier Pile Wall | | | |
| Site Derenzo ph 1 -Permanent soldier pile wall complete | 5,500.00 sf | 220.00 /sf | 1,210,000 |
| 316616 Permanent Soldier Pile Wall | 15,820.00 gsf | 76.49 /gsf | 1,210,000 |
| 323201 Big Block Segmental Retaining Wall | | | |
| Site Derenzo ph 1- Retaining Wall at Generator 120'x 5.0' | 1.00 ls | 25,000.00 /ls | 25,000 |
| 323201 Big Block Segmental Retaining Wall | | /gsf | 25,000 |
| A1020 Special Foundations | 408,500.00 gsf | 15.57 /gsf | 6,359,839 |
| A1030 Lowest Floor Construction | | | |
| 033041 Concrete SOG - Non-structural | | | |
| Concrete Riggs slabs on grade | 1.00 ls | 580,000.00 /ls | 580,000 |
| 033041 Concrete SOG - Non-structural | 142,401.00 sf | 4.07 /sf | 580,000 |
| 033042 Concrete - Structural Slabs | | | |
| Form and set box outs | 375.00 ea | 275.74 /ea | 103,402 |
| Form slab perimeter - 24" dp - structural slab | 4,080.00 sfca | 22.50 /sfca | 91,782 |
| Allowance for slab depressions, eqp pds | 1.00 ls | 33,648.15 /ls | 33,648 |
| Slab depressions shown and edge form less than 12" | 2,460.00 lf | 22.06 /lf | 54,266 |
| Rebar (9.2 #/sf) - ph 2 & 3 (per Harris Rebar) | 445.10 ton | 3,180.93 /ton | 1,415,831 |
| WWM - topping slab | 16,988.00 sf | 0.55 /sf | 9,369 |
| Placing concrete - structural slabs | 4,402.00 cy | 59.56 /cy | 262,182 |
| Placing concrete - non-structural slab | 1,033.00 cy | 59.56 /cy | 61,525 |
| Ready-mix - slabs-on-grade (4000 psi) 9",10".12" no waste | 3,034.00 cy | 203.43 /cy | 617,197 |
| Add for perimeter haunch - 24" ilo of 12" x 24" x 2,040' | 151.11 cy | 203.43 /cy | 30,740 |
| Add for thickned slab at structural slab ph 2,3 | 1,217.00 cy | 203.43 /cy | 247,570 |
| Place & finish slab-on-grade (6") - exterior | 1,200.00 sf | 2.65 /sf | 3,176 |
| Place & finish structural slab-on-grade (9") | 2,890.00 sf | 2.85 /sf | 8,249 |
| Place & finish structural slab-on-grade (10") | 26,465.00 sf | 2.91 /sf | 76,910 |
| Place & finish structural slab-on-grade (12") | 61,707.00 sf | 2.96 /sf | 182,530 |
| 033042 Concrete - Structural Slabs | 147,030.00 sf | 21.75 /sf | 3,198,377 |
| 033046 Concrete - Topping Slab at Radiant Heat | | | |
| Placing concrete - topping slab (SOG) ph 2,3 | 55.56 cy | 59.56 /cy | 3,309 |
| 033046 Concrete - Topping Slab at Radiant Heat | 8,510.00 sf | 0.39 /sf | 3,309 |
| 033094 Concrete - Toilet Bldg | | | |
| Rebar #7 12" oc t & b (13.0#/sf) | 5.20 tn | 3,064.00 /tn | 15,933 |
| Ready-mix - slabs-on-grade (4000 psi) 12"+10% | 29.63 cy | 196.00 /cy | 5,807 |
| Ready-mix - slabs-on-grade add for haunch | 8.85 cy | 196.00 /cy | 1,735 |
| Place & finish slab-on-grade - toilet building | 800.00 sf | 3.30 /sf | 2,639 |
| Edge form - 16" | 120.00 sf | 21.25 /sf | 2,550 |
| 033094 Concrete - Toilet Bldg | | /gsf | 28,664 |
| 070001 Waterproofing, Caulking | | | |
| Waterproofing for elevator pits | 3.00 ls | 4,950.00 /ls | 14,850 |
| 070001 Waterproofing, Caulking | | /gsf | 14,850 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| 312001 Management and Disposition of Excavated Soils | | | |
| MCP Regulated Soil-Less Than RCS-1b(1,000x80%x1.6) | 1,280.00 tns | 24.00 /tns | 30,720 |
| MCP Regulated Soil-Type A Mass Unlined Landfill (2,000x80%x1.6) | 2,560.00 tns | 48.00 /tns | 122,880 |
| MCP Regulated Soil Type C Mass Asphalt Batching Facility (2,500x80%x1.6) | 3,200.00 tns | 53.00 /tns | 169,600 |
| MCP Regulated Soil-Type D Out of State Subtitle D (Non-Hazardous)(1,000x80%x1.6) | 1,280.00 tns | 88.00 /tns | 112,640 |
| Hazardous material (1,000x80%x1.6) | 1,280.00 tns | 335.00 /tns | 428,800 |
| 312001 Management and Disposition of Excavated Soils | | /gsf | 864,640 |
| 312002 Earth Moving within Building Footprint | | | |
| Cut to fill subgrade within building footprint- Phase 2 | 1,345.00 cy | 18.00 /cy | 24,210 |
| Fill from cut inside building footprint- Phase 2 | 1,345.00 cy | 18.00 /cy | 24,210 |
| Fill to subgrade with offsite material inside building footprint- Phase 2 | 6,486.00 cy | 38.00 /cy | 246,468 |
| Cut to fill subgrade within building footprint- Phase 3 | 1,684.00 cy | 18.00 /cy | 30,312 |
| Fill from cut inside building footprint- Phase 3 | 1,684.00 cy | 18.00 /cy | 30,312 |
| Fill to subgrade with offsite material inside building footprint- Phase 3 | 733.00 cy | 40.00 /cy | 29,320 |
| 3/4" Crushed stone below SOG (12") - ph 2,3 | 6,155.00 tn | 28.00 /tn | 172,340 |
| 3/4" Crushed stone below New Exterior & Interior Foundations (3") - ph 2,3 | 4,550.00 tn | 28.00 /tn | 127,400 |
| Excavate for elevator pits - ph 2 | 2.00 ea | 2,420.00 /ea | 4,840 |
| Fine grade under building - ph 2,3 | 83,422.00 sf | 1.10 /sf | 91,764 |
| Filter fabric under slab - ph 2,3 | 83,402.00 sf | 1.00 /sf | 83,402 |
| Excavate & Backfill for Under Slab Plumbing - ph 2,3 | 3,080.00 lf | 18.00 /lf | 55,440 |
| Excavate & Backfill for Sub-Slab Ventilation System - flat vent - ph 2,3 | 3,132.00 lf | 6.00 /lf | 18,792 |
| 312002 Earth Moving within Building Footprint | 142,401.00 gsf | 6.59 /gsf | 938,810 |
| 312600 Management and Disposition of Contaminated Material | | | |
| Site Derenzo ph 1- regulated soil disposal | 1.00 ls | 275,000.00 /ls | 275,000 |
| 312600 Management and Disposition of Contaminated Material | 14,400.00 gsf | 19.10 /gsf | 275,000 |
| <hr/> | | | |
| A1030 Lowest Floor Construction | 408,500.00 gsf | 14.45 /gsf | 5,903,650 |
| <hr/> | | | |
| A10 Foundations | 408,500.00 gsf | 46.37 /gsf | 18,942,743 |
| <hr/> | | | |
| A Substructure | 408,500.00 gsf | 46.37 /gsf | 18,942,743 |
| <hr/> | | | |
| B Shell | | | |
| B10 Superstructure | | | |
| B1010 Floor Construction | | | |
| 015020 Trade Support | | | |
| Staging at stairs | 30.00 fl | 2,750.00 /fl | 82,500 |
| 015020 Trade Support | | /gsf | 82,500 |
| <hr/> | | | |
| 033045 Concrete - SOD | | | |
| Concrete Riggs slabs on deck including floating floors | 1.00 ls | 720,000.00 /ls | 720,000 |
| Allowance for slab depressions, eqp pds no shown | 1.00 ls | 22,059.14 /ls | 22,059 |
| Slab depressions shown | 835.00 lf | 22.06 /lf | 18,419 |
| WWM material - floor SOMD (6x6 W2.9/W2.9) | 196,100.00 sf | 0.55 /sf | 108,145 |
| Ready-mix - slabs-on-deck - floor (4000 psi NW) (6.5") | 3,934.11 cy | 203.43 /cy | 800,303 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|---------------------|-------------------|
| 033045 Concrete - SOD | | | |
| Place & finish slab-on-deck (F6.5) - Floor | 196,100.00 sf | 3.03 /sf | 594,797 |
| Rebar at slab edge | 21.00 tn | 3,180.93 /tn | 66,800 |
| 033045 Concrete - SOD | 288,255.00 sf | 8.09 /sf | 2,330,523 |
| 033046 Concrete - Topping Slab at Radiant Heat | | | |
| Rigid insulation - radiant heat slab ph 2,3 | 4,500.00 sf | 3.31 /sf | 14,890 |
| WWM (SOG) - ph 2,3 | 4,500.00 sf | 0.31 /sf | 1,401 |
| Ready-mix - (4000 psi) 4" no waste - topping slab ph 2,3 | 55.56 cy | 203.43 /cy | 11,302 |
| Place & finish topping slab at radiant heat - 5" ph 2,3 | 4,500.00 sf | 3.03 /sf | 13,649 |
| 033046 Concrete - Topping Slab at Radiant Heat | 7,830.00 sf | 5.27 /sf | 41,243 |
| 051200 Structural Steel - Phase 1 | | | |
| Structural steel - Trimax ph 1 (1,630 tons) | 1.00 ls | 7,260,500.00 /ls | 7,260,500 |
| 051200 Structural Steel - Phase 1 | 2,801.00 sf | 2,592.11 /sf | 7,260,500 |
| 051210 Structural Steel - Phase 2 & 3 | | | |
| Structural steel beams (12.50#/sf) | 1,569.00 tn | 3,325.00 /tn | 5,216,925 |
| Structural steel columns (3.61#/sf) | 518.00 tn | 3,325.00 /tn | 1,722,350 |
| Structural steel brace frames (0.94#/sf) | 135.00 tn | 3,325.00 /tn | 448,875 |
| Structural steel relieving angles | 50.00 tn | 4,200.00 /tn | 210,000 |
| <i>Laborer for trade support - Structural Steel ph 2,3</i> | <i>wks</i> | <i>/wks</i> | |
| Grating at catwalk - black box | 670.00 sf | 70.00 /sf | 46,900 |
| 051210 Structural Steel - Phase 2 & 3 | | /sf | 7,645,050 |
| 053100 Steel Decking | | | |
| Metal floor decking 2" (F6.5) 18ga - SOD | 196,100.00 sf | 3.10 /sf | 607,910 |
| Metal floor decking 2" (F5.5) 18ga - SOD | 8,580.00 sf | 3.82 /sf | 32,761 |
| 053100 Steel Decking | 270,366.00 sf | 2.37 /sf | 640,671 |
| 078100 Applied Fireproofing | | | |
| New steel beams and columns - floors | 284,102.00 sf | 2.55 /sf | 724,460 |
| 078100 Applied Fireproofing | 284,102.00 sf | 2.55 /sf | 724,460 |
| 078410 Firestopping | | | |
| Fire stopping - MEP penetrations | 408,500.00 gsf | 0.18 /gsf | 73,530 |
| 078410 Firestopping | 408,500.00 gsf | 0.18 /gsf | 73,530 |
| 079500 Expansion Control | | | |
| Expansion joint complete | 1.00 ls | 150,000.00 /ls | 150,000 |
| 079500 Expansion Control | | /gsf | 150,000 |
| B1010 Floor Construction | 408,500.00 gsf | 46.39 /gsf | 18,948,477 |
| B1020 Roof Construction | | | |
| 033045 Concrete - SOD | | | |
| Concrete Riggs slabs on deck including floating floors | 1.00 ls | 270,000.00 /ls | 270,000 |
| WWM material - roof SOMD (6x6 W2.9/W2.9) | 8,655.00 sf | 0.55 /sf | 4,773 |
| Ready-mix - slabs-on-deck - roof (4000 psi NW) (5.5") | 147.00 cy | 203.43 /cy | 29,904 |
| Place & finish slab-on-deck (F5.5) - Roof | 8,655.00 sf | 3.03 /sf | 26,252 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|---------------------|-------------------|
| 033045 Concrete - SOD | | | |
| Edge form | 9,000.00 sf | 12.46 /sf | 112,093 |
| 033045 Concrete - SOD | 28,647.00 sf | 15.47 /sf | 443,022 |
| 052100 Steel Joist Framing | | | |
| Long span joist - at gym (10.14#/sf) | 161.00 tn | 3,800.00 /tn | 611,800 |
| 052100 Steel Joist Framing | 165.00 tn | 3,707.88 /tn | 611,800 |
| 053100 Steel Decking | | | |
| Metal decking 1.5" (F1.5) 18ga - roof | 46,740.00 sf | 3.10 /sf | 144,894 |
| Acoustical metal roof decking 3.0" (F3.0) 18/20ga - roof | 35,360.00 sf | 7.20 /sf | 254,592 |
| 053100 Steel Decking | 147,162.00 sf | 2.72 /sf | 399,486 |
| 061753 Shop Fabricated Wood Trusses | | | |
| 20" dp TJI with bracing at toilet building | 800.00 sf | 13.86 /sf | 11,088 |
| Plywd roof | 800.00 sf | 8.00 /sf | 6,400 |
| 061753 Shop Fabricated Wood Trusses | | /gsf | 17,488 |
| 078100 Applied Fireproofing | | | |
| New steel beams and columns - roof | 85,837.00 sf | 2.65 /sf | 227,468 |
| 078100 Applied Fireproofing | 85,837.00 sf | 2.65 /sf | 227,468 |
| B1020 Roof Construction | 408,500.00 gsf | 4.16 /gsf | 1,699,264 |
| B10 Superstructure | 408,500.00 gsf | 50.55 /gsf | 20,647,741 |
| B20 Exterior Enclosure | | | |
| B2010 Exterior Walls | | | |
| 042000 Unit Masonry | | | |
| Multi trade staging at rear of phase 1 - 6 mo | 30,000.00 sf | 12.00 /sf | 360,000 |
| Exterior staging | 99,327.00 sf | 4.00 /sf | 397,308 |
| Brick veneer A, Endicott Clay Smooth/Artisan blend (\$9.87/sf) incl insulation & SS ties | 61,000.00 sf | 39.75 /sf | 2,424,750 |
| Brick veneer B, with accents at auditorium | 4,211.00 sf | 42.75 /sf | 180,020 |
| Brick veneer C, with 3/4" projected brick | 7,265.00 sf | 42.75 /sf | 310,579 |
| Brick - premium for soldier course accent | 1,597.00 sf | 1.50 /sf | 2,396 |
| Brick - premium for sloped brick at auditorium windows | 230.00 sf | 8.00 /sf | 1,840 |
| Decorative CMU - (Jandris or Westbrok) polished incl insul & ties | 58,000.00 sf | 28.50 /sf | 1,653,000 |
| Decorative CMU -type B rotated | 632.00 sf | 42.00 /sf | 26,544 |
| Decorative CMU -type C accent, and smaller | 1,009.00 sf | 34.00 /sf | 34,306 |
| Decorative CMU -premium for soldier course | 994.00 sf | 1.00 /sf | 994 |
| Decorative CMU - at loading dock | 2,000.00 sf | 28.50 /sf | 57,000 |
| Anti-graffiti coating | 23,350.00 sf | 6.00 /sf | 140,100 |
| Add for date stone | 2.00 ls | 1,000.00 /ls | 2,000 |
| Glazed Brick, Beldin veneer including insulation & SS ties | 672.00 sf | 48.00 /sf | 32,256 |
| Mock- up - masonry | 1.00 ls | 45,000.00 /ls | 45,000 |
| CMU backup 8" reinforced - 121' x 12' at toilet bldg | 1,452.00 sf | 23.50 /sf | 34,122 |
| Polished ground CMU veneer w/ insulation - 4" 121'x15' at toilet bldg | 1,671.00 sf | 31.00 /sf | 51,801 |
| Laborer for trade support - Masonry | 20.00 wks | 4,334.00 /wks | 86,680 |
| Laborer for trade support - Masonry | (20.00) wks | 4,334.00 /wks | (86,680) |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|----------------------|-------------------|------------------|
| 042000 Unit Masonry | 132,108.00 sf | 43.56 /sf | 5,754,016 |
| 055000 Metal Fabrications | | | |
| Loose lintels (base on sf of brick) | 130,224.00 sf | 0.50 /sf | 65,112 |
| 055000 Metal Fabrications | | /gsf | 65,112 |
| 057500 Decorative Formed Metal (column covers) | | | |
| Exterior column covers - 24" diam x 16.0' North Canopy 8 ea | 128.00 lf | 350.00 /lf | 44,800 |
| Exterior column covers - 24" diam x 16.0' South Canopy 8 ea | 128.00 lf | 350.00 /lf | 44,800 |
| Exterior column covers - 24" x 14.0' diam east courtyard 3 ea | 42.00 lf | 350.00 /lf | 14,700 |
| 057500 Decorative Formed Metal (column covers) | | /lf | 104,300 |
| 070001 Waterproofing, Caulking | | | |
| Mock-up - waterproofing | 1.00 ls | 15,000.00 /ls | 15,000 |
| sealing & caulking - exterior - masonry | 132,108.00 sf | 1.00 /sf | 132,108 |
| sealing & caulking - exterior - masonry toilet building | 1,671.00 sf | 1.10 /sf | 1,838 |
| Air/vapor barrier - perimeter of curtain-wall | 10,222.00 lf | 10.80 /lf | 110,398 |
| Air/vapor barrier - exterior walls - masonry | 132,108.00 sf | 5.50 /sf | 726,594 |
| Air/vapor barrier - exterior walls - exterior walls - mtl panel | 13,724.00 sf | 5.94 /sf | 81,521 |
| Air/vapor barrier - exterior walls - exterior soffits - DAFS | 9,663.00 sf | 5.94 /sf | 57,398 |
| Air/vapor barrier - exterior walls - masonry - toilet bldg | 1,671.00 sf | 5.94 /sf | 9,926 |
| 070001 Waterproofing, Caulking | | /gsf | 1,134,782 |
| 070002 Roofing & Flashing | | | |
| Thermoplastic roofing 60 mil - vertical at parapet 743' x 2' | 2,580.00 sf | 15.50 /sf | 39,990 |
| 070002 Roofing & Flashing | | /gsf | 39,990 |
| 074200 Metal Wall Panels | | | |
| Mock-up - metal panels | 1.00 ls | 20,000.00 /ls | 20,000 |
| Metal panel siding - corrugated | 11,616.00 sf | 62.00 /sf | 720,192 |
| Metal panel siding - corrugated radius | 300.00 sf | 70.00 /sf | 21,000 |
| Metal panels at roof screens; acoustical incl purlins 291'x11' | 3,201.00 sf | 72.00 /sf | 230,472 |
| Metal panel at misc curtainwall perimeter areas | 400.00 sf | 72.00 /sf | 28,800 |
| 074200 Metal Wall Panels | 16,419.00 gsf | 62.15 /gsf | 1,020,464 |
| 074220 Specialized Column Cover (Tree) | | | |
| Custom fabricated "tree" FOB | 1.00 ls | 54,500.00 /ls | 54,500 |
| Custom painting and supervision | 1.00 ls | 6,500.00 /ls | 6,500 |
| Field installation | 1.00 ls | 15,000.00 /ls | 15,000 |
| Adjust to Blue Bird | (1.00) ls | 36,000.00 /ls | (36,000) |
| 074220 Specialized Column Cover (Tree) | | /gsf | 40,000 |
| 074249 Sintered Stone Wall Cladding | | | |
| Sintered stone cladding North Entry (flush with CW) | 177.00 sf | 110.00 /sf | 19,470 |
| Sintered stone cladding cornice/soffit - South entry | 1,544.00 sf | 110.00 /sf | 169,840 |
| Sintered stone cornice/soffit - frieze beneath | 121.00 sf | 110.00 /sf | 13,310 |
| Sintered stone at projected bay windows | 173.00 sf | 110.00 /sf | 19,030 |
| 074249 Sintered Stone Wall Cladding | | | 221,650 |
| 090007 Painting | | | |
| Anti-graffiti coating to 12' hic | 1,500.00 sf | 4.00 /sf | 6,000 |
| Paint exposed lintel/relieving angle | 1,000.00 lf | 60.00 /lf | 60,000 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| 090007 Painting | | /gsf | 66,000 |
| 092900 Gypsum Board Assemblies | | | |
| Mock-up - lgmf | 1.00 ls | 15,000.00 /ls | 15,000 |
| Interior gypsum at exterior walls | 151,394.00 sf | 3.10 /sf | 469,321 |
| LGF and sheathing at exterior walls - masonry | 136,398.00 sf | 14.50 /sf | 1,977,770 |
| LGF and sheathing at exterior walls - siding | 17,517.00 sf | 14.50 /sf | 253,996 |
| LGF and sheathing at exterior soffits - DAFS (prev 9,663sf) | 9,770.00 sf | 14.50 /sf | 141,665 |
| Engineering | 1.00 ls | 50,000.00 /ls | 50,000 |
| 092900 Gypsum Board Assemblies | 161,057.00 sf | 18.05 /sf | 2,907,753 |
| 092910 Direct Applied Finish System (DAFS) | | | |
| DAFS | 9,770.00 sf | 42.00 /sf | 410,340 |
| 092910 Direct Applied Finish System (DAFS) | 9,770.00 sf | 42.00 /sf | 410,340 |
| 101400 Signage | | | |
| Allowance for exterior building signage | 1.00 ls | 40,000.00 /ls | 40,000 |
| 101400 Signage | | /gsf | 40,000 |
| B2010 Exterior Walls | 408,500.00 gsf | 28.90 /gsf | 11,804,407 |
| B2020 Exterior Windows | | | |
| 061000 Rough Carpentry | | | |
| Window blocking - aluminum windows | 7,274.00 lf | 8.66 /lf | 63,011 |
| Window blocking - curtain wall | 10,294.00 lf | 8.66 /lf | 89,172 |
| Window blocking - curtain wall; interior | 350.00 lf | 8.66 /lf | 3,032 |
| 061000 Rough Carpentry | 20,510.00 gsf | 7.57 /gsf | 155,215 |
| 070001 Waterproofing, Caulking | | | |
| sealing & caulking - exterior - perimeter AW | 6,304.00 lf | 10.00 /lf | 63,040 |
| sealing & caulking - exterior - perimeter CW | 11,017.00 lf | 10.00 /lf | 110,170 |
| 070001 Waterproofing, Caulking | | /gsf | 173,210 |
| 084410 Glazed Aluminum Curtainwall (window TB) | | | |
| Mock-up - curtainwall | 1.00 ls | 45,000.00 /ls | 45,000 |
| Silicone sealant and extrusion at perimeter of CW | 11,017.00 lf | 20.00 /lf | 220,340 |
| Premium for custom extrusion profile | 2,750.00 lf | 40.00 /lf | 110,000 |
| Curtain-wall | 37,791.00 sf | 110.00 /sf | 4,157,010 |
| Premium Bump out windows at Pre-K area - Curtain-wall (CW 20x10) | 449.00 sf | 40.00 /sf | 17,960 |
| Premium for North Facing (includes SHGC premium) | 14,392.00 sf | 6.00 /sf | 86,352 |
| Add for security glazing where shown | 2,800.00 sf | 40.00 /sf | 112,000 |
| Curtain-wall add for operable sash | 3,506.00 sf | 60.00 /sf | 210,360 |
| Curtainwall canopy | 2.00 ls | 10,000.00 /ls | 20,000 |
| Laborer for trade support - Curtain-wall | 43.00 wks | 4,334.00 /wks | 186,362 |
| Laborer for trade support - Curtain-wall | (43.00) wks | 4,334.00 /wks | (186,362) |
| 084410 Glazed Aluminum Curtainwall (window TB) | 37,848.00 sf | 131.55 /sf | 4,979,022 |
| 084523 Fiberglass Panels (window TB) | | | |
| Kalwall window system FP1, FP2 | 877.00 sf | 80.00 /sf | 70,160 |
| 084523 Fiberglass Panels (window TB) | | /gsf | 70,160 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|---------------------|-------------------|
| 085110 Aluminum Windows (window TB) | | | |
| Aluminum windows - standard | 7,702.00 sf | 93.00 /sf | 716,286 |
| Add for - North facing - SHGC glass | 3,356.00 sf | 4.50 /sf | 15,102 |
| 085110 Aluminum Windows (window TB) | 8,106.00 sf | 90.23 /sf | 731,388 |
| 089000 Louvers & Vents (window TB) | | | |
| Louvers at exterior | 600.00 sf | 100.00 /sf | 60,000 |
| 089000 Louvers & Vents (window TB) | 380.00 gsf | 157.90 /gsf | 60,000 |
| <hr/> | | | |
| B2020 Exterior Windows | 408,500.00 gsf | 15.10 /gsf | 6,168,995 |
| B2030 Exterior Doors | | | |
| 083300 Overhead Coiling Doors | | | |
| Coiling door at toilet buildng - 8' w | 1.00 ea | 5,000.00 /ea | 5,000 |
| 083300 Overhead Coiling Doors | | /ea | 5,000 |
| 083330 Exterior OH Coiling Door | | | |
| Insulated coiling door EX227 Maker/Wood | 120.00 sf | 60.00 /sf | 7,200 |
| Add for operator | 1.00 ls | 1,500.00 /ls | 1,500 |
| 083330 Exterior OH Coiling Door | 1.00 ea | 8,700.00 /ea | 8,700 |
| 084410 Glazed Aluminum Curtainwall (window TB) | | | |
| Aluminum (ext) doors complete | 55.00 lvs | 4,500.00 /lvs | 247,500 |
| FRP doors in alum frames | 8.00 lvs | 2,500.00 /lvs | 20,000 |
| Handicap operators Hrdw set 67(3), 68(1), 69(1) ext | 5.00 lvs | 4,000.00 /lvs | 20,000 |
| 084410 Glazed Aluminum Curtainwall (window TB) | 48.00 sf | 5,989.58 /sf | 287,500 |
| <hr/> | | | |
| B2030 Exterior Doors | 408,500.00 gsf | 0.74 /gsf | 301,200 |
| <hr/> | | | |
| B20 Exterior Enclosure | 408,500.00 gsf | 44.74 /gsf | 18,274,602 |
| B30 Roofing | | | |
| B3010 Roof Coverings | | | |
| 055000 Metal Fabrications | | | |
| Roof ladders (2.5',3.0',6.0',13.0',14.0',15.5',17.0') | 71.00 vlf | 900.00 /vlf | 63,900 |
| 055000 Metal Fabrications | | /gsf | 63,900 |
| 061000 Rough Carpentry | | | |
| Roof blocking - edge condition - rev to 7 pc/lf (7/A6.1) | 5,105.00 lf | 44.00 /lf | 224,620 |
| Roof blocking - misc based on roof sf | 153,059.00 sf | 0.75 /sf | 114,794 |
| Roof blocking - at skylights - straight | 1,406.00 lf | 36.00 /lf | 50,616 |
| Roof blocking - at skylights - radius | 575.00 lf | 60.00 /lf | 34,500 |
| 061000 Rough Carpentry | 150,740.00 gsf | 2.82 /gsf | 424,530 |
| 070002 Roofing & Flashing | | | |
| Mock-up -roof | 1.00 ls | 10,000.00 /ls | 10,000 |
| Metal fascia at canopies | 1,051.00 lf | 45.00 /lf | 47,295 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|---------------------|------------------|
| 070002 Roofing & Flashing | | | |
| Thermoplastic roofing, min R40 R1A (flat) | 75,283.00 sf | 13.45 /sf | 1,012,556 |
| Thermoplastic roofing, min R40 R1B, 1B1 (tapered) | 55,116.00 sf | 15.00 /sf | 826,740 |
| Thermoplastic roofing, min R40 R1C (tapered) | 13,259.00 sf | 15.00 /sf | 198,885 |
| Thermoplastic roofing, min R40 R1D (canopies) | 1,869.00 sf | 18.00 /sf | 33,642 |
| Thermoplastic roofing, min R40 R1E,F (Green Roof) | 9,213.00 sf | 22.00 /sf | 202,686 |
| R1G Roofing at tilt building | 750.00 sf | 15.00 /sf | 11,250 |
| Pavers with landscaping | 1.00 ls | 0.01 /ls | 0 |
| Parapet roof edge (7/A6.2) | 860.00 lf | 54.00 /lf | 46,440 |
| Roof edge without tapper | 3,233.00 lf | 52.00 /lf | 168,116 |
| Flashing at stair towers | 400.00 lf | 31.50 /lf | 12,600 |
| Flashing at green roof | 312.00 lf | 31.50 /lf | 9,828 |
| Flashing at canopies | 371.00 lf | 31.50 /lf | 11,687 |
| Add for overflow scuppers | 25.00 ea | 360.00 /ea | 9,000 |
| Flashing at roof curbs - US 1-5 skylights | 1,406.00 lf | 36.00 /lf | 50,616 |
| Flashing at roof curbs - US 6-8 skylights | 575.00 lf | 36.00 /lf | 20,700 |
| 070002 Roofing & Flashing | 154,740.00 gsf | 17.27 /gsf | 2,672,041 |
| 110140 Tieback and Lifeline Anchors | | | |
| Tie off davits, no cable, bolted to structural steel with isolation pad | 62.00 ea | 1,285.71 /ea | 79,714 |
| 110140 Tieback and Lifeline Anchors | | /gsf | 79,714 |
| B3010 Roof Coverings | | | |
| | 408,500.00 gsf | 7.93 /gsf | 3,240,185 |
| B3020 Roof Openings | | | |
| 077200 Roof Accessories (roofing TB) | | | |
| Smoke hatches above stage 5.5'x12' acoustically rated | 2.00 ea | 12,000.00 /ea | 24,000 |
| Elevator vent | 3.00 ea | 1,800.00 /ea | 5,400 |
| 077200 Roof Accessories (roofing TB) | | /gsf | 29,400 |
| 086200 Unit Skylights (roofing TB) | | | |
| US 1 - Prefabricated unit skylights - 7' 4" x 5'-0" | 5.00 ea | 3,032.00 /ea | 15,160 |
| US 2 - Prefabricated unit skylights at gym - 4' 10" x 4' 10" | 48.00 ea | 1,989.56 /ea | 95,499 |
| US 3 - Prefabricated unit skylights - 4' 2" x 4' 2" | 6.00 ea | 1,511.20 /ea | 9,067 |
| US 4 - Prefabricated unit skylights - 3' 4" x 3' 4" | 1.00 ea | 987.11 /ea | 987 |
| US 4A - Prefabricated unit skylights - 3' 4" x 3' 4" | 8.00 ea | 987.00 /ea | 7,896 |
| US 5 - Prefabricated unit skylights - 2' 1" x 2' x 1" | 1.00 ea | 760.00 /ea | 760 |
| US 6- Prefabricated unit skylights - D = 8' | 2.00 ea | 6,696.00 /ea | 13,392 |
| US 7 - Prefabricated unit skylights - D = 5' | 4.00 ea | 2,422.00 /ea | 9,688 |
| US 8 - Prefabricated unit skylights 4' 2" x 2' 9" | 6.00 ea | 1,024.00 /ea | 6,144 |
| US 8A - Prefabricated unit skylights 4' 2" x 2' 9" | 4.00 ea | 1,024.00 /ea | 4,096 |
| 086200 Unit Skylights (roofing TB) | 116.00 ea | 1,402.49 /ea | 162,689 |
| 086300 Modular Skylights (window TB) | | | |
| MS1 Metal framed skylights - 118' x 3'-4" | 394.00 sf | 140.00 /sf | 55,160 |
| MS2 Metal framed skylights - 17' x 8' 6" x 2 | 289.00 sf | 130.00 /sf | 37,570 |
| 086300 Modular Skylights (window TB) | 2,084.00 sf | 44.50 /sf | 92,730 |
| 122400 Window Shades | | | |
| US 8A - 4'-0" x 2'-9" - integral shade power operated | 4.00 ea | 1,750.00 /ea | 7,000 |
| US 1 - 7' 4" x 5'-0" integral shade power operated | 3.00 ea | 3,000.00 /ea | 9,000 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|--------------------|-------------------|
| 122400 Window Shades | 54.00 gsf | 296.30 /gsf | 16,000 |
| B3020 Roof Openings | 408,500.00 gsf | 0.74 /gsf | 300,819 |
| B30 Roofing | 408,500.00 gsf | 8.67 /gsf | 3,541,004 |
| B Shell | 408,500.00 gsf | 103.95 /gsf | 42,463,347 |
| C Interiors | | | |
| C10 Interior Construction | | | |
| C1010 Partitions | | | |
| 015020 Trade Support | | | |
| Hoisting | 60.00 mo | 5,000.00 /mo | 300,000 |
| 015020 Trade Support | | /gsf | 300,000 |
| 042000 Unit Masonry | | | |
| CMU partition - interior - elevator shafts | 12,340.00 sf | 32.00 /sf | 394,880 |
| CMU partition - interior at locker area - 16A - 960' x 12'-8" | 12,158.00 sf | 24.00 /sf | 291,792 |
| CMU partition - interior at locker area - 16B - 213' x 12'-8" | 2,697.00 sf | 24.00 /sf | 64,728 |
| CMU partition - interior at locker area - 16C | 340.00 sf | 24.00 /sf | 8,160 |
| Install HM frame | 30.00 ea | 197.31 /ea | 5,919 |
| CMU partition type 16 A - interior 84' x 12'h toilet bldg | 1,010.00 sf | 24.00 /sf | 24,240 |
| CMU partition type 16 B - interior 16' x 12'h toilet bldg | 700.00 sf | 24.00 /sf | 16,800 |
| Install HM frame at toilet bldg toilet bldg | 4.00 ea | 197.31 /ea | 789 |
| 042000 Unit Masonry | | /sf | 807,309 |
| 055000 Metal Fabrications | | | |
| Seismic clips - 4'oc each side - interior | 456.00 ea | 66.00 /ea | 30,096 |
| 055000 Metal Fabrications | | /gsf | 30,096 |
| 061000 Rough Carpentry | | | |
| Additional wood blocking - building interior | 408,500.00 gsf | 0.62 /gsf | 253,270 |
| Wood base lgm at lockers | 1,300.00 lf | 69.30 /lf | 90,090 |
| 061000 Rough Carpentry | | /gsf | 343,360 |
| 080007 Glazing | | | |
| Single glazed borrowed light | 6,772.00 sf | 55.00 /sf | 372,460 |
| Double glazed borrowed light | 1,943.00 sf | 110.00 /sf | 213,730 |
| Glass at D-lab, sngl glazed | 142.19 sf | 55.00 /sf | 7,820 |
| applied film on glass | 245.00 ea | 200.00 /ea | 49,000 |
| # of lights | 637.00 ea | 0.00 /ea | 1 |
| Anti-reflective glass at auditorium | 28.00 sf | 150.00 /sf | 4,200 |
| 080007 Glazing | | /gsf | 647,211 |
| 084410 Glazed Aluminum Curtainwall (window TB) | | | |
| Interior Curtain-wall (ICW) | 1,386.00 sf | 110.00 /sf | 152,460 |
| Interior Curtain-wall (CW 48B vestibule) | 809.00 sf | 110.00 /sf | 88,990 |
| 084410 Glazed Aluminum Curtainwall (window TB) | 3,708.50 sf | 65.11 /sf | 241,450 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| 092900 Gypsum Board Assemblies | | | |
| Ceiling assembly at vestibule complete | 430.00 sf | 90.00 /sf | 38,700 |
| Premium for MR board at wall tile | 65,185.00 sf | 0.10 /sf | 6,519 |
| Premium for high impact at stairs | 20,000.00 sf | 0.95 /sf | 19,000 |
| Gyp board at stairs walls | 995.00 sf | 6.00 /sf | 5,970 |
| Gyp board at stair soffit | 120.00 sf | 6.00 /sf | 720 |
| Gyp partition type 1A - stud + gyp (1+1+ insul) | 71,486.00 sf | 12.35 /sf | 882,852 |
| Gyp partition type 1B - stud + gyp (1+1+ insul) | 768.00 sf | 12.35 /sf | 9,485 |
| Gyp partition type 1C - stud + gyp (1+1+ insul) | 570.00 sf | 12.35 /sf | 7,040 |
| Gyp partition type 2A - stud + gyp (2+1+ insul) | 166,781.00 sf | 15.44 /sf | 2,574,682 |
| Gyp partition type 2B - stud + gyp (2+1+ insul) | 469.00 sf | 15.44 /sf | 7,241 |
| Gyp partition type 2C - stud + gyp (2+1+ insul) | 23,805.00 sf | 15.44 /sf | 367,490 |
| Gyp partition type 3A - stud + gyp (2+2+ insul) | 65,339.00 sf | 18.53 /sf | 1,210,405 |
| Gyp partition type 3C - stud + gyp (2+2+ insul) | 2,285.00 sf | 18.53 /sf | 42,330 |
| Gyp partition type 4A - stud + gyp (1+ insul) | 4,244.00 sf | 8.31 /sf | 35,278 |
| Gyp partition type 5A - stud + gyp (1+1+ insul) | 10,204.00 sf | 12.35 /sf | 126,019 |
| Gyp partition type 5B - stud + gyp (1+1+ insul) | 160.00 sf | 12.35 /sf | 1,976 |
| Gyp partition type 6A - stud + gyp (1+ insul) | 23,728.00 sf | 8.31 /sf | 197,239 |
| Gyp partition type 6B - stud + gyp (1+ insul) | 10,036.00 sf | 8.31 /sf | 83,399 |
| Gyp partition type 7A - stud + gyp (2+ insul) | 115,881.00 sf | 11.40 /sf | 1,321,043 |
| Gyp partition type 7B - stud + gyp (2+ insul) | 12,688.00 sf | 11.40 /sf | 144,643 |
| Gyp partition type 7C - stud + gyp (2+ insul) | 524.00 sf | 11.40 /sf | 5,974 |
| Gyp partition type 8A - stud + gyp (1) | 30,590.00 sf | 8.31 /sf | 254,203 |
| Gyp partition type 8B - stud + gyp (1) at column surrounds | 79,606.00 sf | 9.50 /sf | 756,257 |
| Gyp partition type 10A shaftwall 2 hr | 15,835.00 sf | 18.05 /sf | 285,822 |
| Gyp partition type 12A - staggered dbl ms + gyp (2+2+ insul) | 1,354.00 sf | 24.23 /sf | 32,801 |
| Gyp partition type 12B - staggered dbl ms + gyp (2+2+ insul) | 18,945.00 sf | 24.23 /sf | 458,943 |
| Gyp partition type 14A - low wall - stud + gyp (1+1+ insul) | 1,443.00 sf | 24.23 /sf | 34,957 |
| Gyp partition type 14B - low wall - stud + gyp (1+1+ insul) | 263.00 sf | 24.23 /sf | 6,371 |
| 092900 Gypsum Board Assemblies | 408,500.00 sf | 21.83 /sf | 8,917,357 |
| 102220 Operable Partitions | | | |
| Operable partition at Sped conf 232 | 12.00 lf | 750.00 /lf | 9,000 |
| Operable partition classroom 414,415 | 30.00 lf | 660.00 /lf | 19,800 |
| Operable partition classroom 429/430 | 30.00 lf | 660.00 /lf | 19,800 |
| 102220 Operable Partitions | 217.00 lf | 223.96 /lf | 48,600 |
| C1010 Partitions | 408,500.00 gsf | 27.75 /gsf | 11,335,383 |
| C1020 Interior Doors | | | |
| 080007 Glazing | | | |
| Non-rated glass in wd door - type B - 18" x 65" | 40.00 ea | 325.00 /ea | 13,000 |
| Non-rated glass in wd door - type E - 9" x 65" | 167.00 ea | 250.00 /ea | 41,750 |
| Non-rated glass in wd door - type F - 9" x 32" | 118.00 ea | 175.00 /ea | 20,650 |
| Non-rated glass in wd door - type H - 6" x 26" | 19.00 ea | 150.00 /ea | 2,850 |
| Non-rated glass in wd door - type H - 12" x 31" | 19.00 ea | 225.00 /ea | 4,275 |
| Rated glass in wood door type D 3"x30" | 41.00 ea | 300.00 /ea | 12,300 |
| 080007 Glazing | | /gsf | 94,825 |
| 081110 Hollow Metal Frames | | | |
| HM doors - interior at toilet building | 4.00 lvs | 250.00 /lvs | 1,000 |
| HM frames - single (3' x 7') at toilet building | 4.00 ea | 250.00 /ea | 1,000 |
| HM frames - type 1, single | 563.00 ea | 362.00 /ea | 203,806 |
| HM frames - type 2, double | 89.00 ea | 410.00 /ea | 36,490 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-------------------|---------------------|----------------|
| 081110 Hollow Metal Frames | | | |
| HM frames - type 3, single | 32.00 ea | 362.00 /ea | 11,584 |
| HM frame - type 4 | 27.00 ea | 362.00 /ea | 9,774 |
| 081110 Hollow Metal Frames | 711.00 gsf | 370.82 /gsf | 263,654 |
| 081400 Flush Wood Doors | | | |
| Wood doors - A flush | 417.00 lvs | 365.00 /lvs | 152,205 |
| Wood doors - B two lights | 40.00 lvs | 425.00 /lvs | 17,000 |
| Wood doors - D single light | 41.00 lvs | 392.00 /lvs | 16,072 |
| Wood doors - E single light | 167.00 lvs | 392.00 /lvs | 65,464 |
| Wood doors - F single light | 118.00 lvs | 392.00 /lvs | 46,256 |
| Wood doors - H two lights | 19.00 lvs | 480.00 /lvs | 9,120 |
| add for STC30 | 146.00 lvs | 40.00 /lvs | 5,840 |
| add for STC40 | 18.00 lvs | 250.00 /lvs | 4,500 |
| add for 90 minute FR | 77.00 lvs | 125.00 /lvs | 9,625 |
| 081400 Flush Wood Doors | 802.00 lvs | 406.59 /lvs | 326,082 |
| 083100 Access Doors and Panels | | | |
| Access doors & frames | 1.00 ls | 25,000.00 /ls | 25,000 |
| 083100 Access Doors and Panels | | /gsf | 25,000 |
| 083300 Overhead Coiling Doors | | | |
| Manual coiling door at theater control room 2/A12.7.2 | 1.00 ea | 3,900.00 /ea | 3,900 |
| Overhead coiling door - 7'x10' at stage vestibule 236 | 1.00 ea | 4,522.00 /ea | 4,522 |
| 083300 Overhead Coiling Doors | 4.00 ea | 2,105.50 /ea | 8,422 |
| 083320 Overhead Coiling Grilles | | | |
| OH027A - 5'-5" | 6.00 lf | 900.00 /lf | 5,400 |
| OH231A - 5'-0" | 5.00 lf | 900.00 /lf | 4,500 |
| OH334B - 7'-5" | 8.00 lf | 900.00 /lf | 7,200 |
| 083320 Overhead Coiling Grilles | 556.00 ea | 30.76 /ea | 17,100 |
| 083336 Side Coiling Grilles | | | |
| Side coiling grille at servery | 62.00 lf | 1,050.00 /lf | 65,100 |
| 083336 Side Coiling Grilles | | /gsf | 65,100 |
| 083510 Horizontal-Sliding Accordion Door | | | |
| Horizontal fire door at level 2 star 2 | 28.00 lf | 1,400.00 /lf | 39,200 |
| 083510 Horizontal-Sliding Accordion Door | | /ea | 39,200 |
| 083513 Folding Doors | | | |
| Interior glass folding door (Nana Wall)- 24'x10' at library L3 346.2 | 1.00 ea | 45,600.00 /ea | 45,600 |
| Interior glass folding door 235 - 6' long x 4'-2" h | 1.00 ea | 8,000.00 /ea | 8,000 |
| 083513 Folding Doors | 700.00 gsf | 76.57 /gsf | 53,600 |
| 084410 Glazed Aluminum Curtainwall (window TB) | | | |
| Aluminum (int) doors complete | 29.00 lvs | 4,500.00 /lvs | 130,500 |
| Handicap operators Hrdw set 59(3), 60(1) int | 4.00 lvs | 4,000.00 /lvs | 16,000 |
| 084410 Glazed Aluminum Curtainwall (window TB) | | /sf | 146,500 |

087010 Install Doors and Hardware

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-------------------|--------------------|----------------|
| 087010 Install Doors and Hardware | | | |
| Install door & hardware - interior | 802.00 lvs | 491.00 /lvs | 393,782 |
| Hardware - 24 VDC power supply for mortise lock | 82.00 ea | 0.00 /ea | 0 |
| Hardware - 2-ball bearing hinge | 1,920.00 ea | 0.00 /ea | 2 |
| Hardware - 4-ball bearing hinge | 371.00 ea | 0.00 /ea | 0 |
| Hardware - acoustic automatic door bottom seal | 51.00 ea | 0.00 /ea | 0 |
| Hardware - acoustic automatic door bottoms | 16.00 ea | 0.00 /ea | 0 |
| Hardware - acoustic meeting stile gasketing | 29.00 ea | 0.00 /ea | 0 |
| Hardware - auto drop door bottom | 108.00 ea | 0.00 /ea | 0 |
| Hardware - automatic door operator | 2.00 ea | 0.01 /ea | 0 |
| Hardware - classroom function deadbolt | 16.00 ea | 0.00 /ea | 0 |
| Hardware - cylinder core housing | 750.00 ea | 0.00 /ea | 1 |
| Hardware - door closer | 267.00 ea | 0.00 /ea | 0 |
| Hardware - door closer w mech HO | 16.00 ea | 0.00 /ea | 0 |
| Hardware - door kick plates | 677.00 ea | 0.00 /ea | 1 |
| Hardware - door protection plaets | 254.00 ea | 0.00 /ea | 0 |
| Hardware - door stop | 791.00 ea | 0.00 /ea | 1 |
| Hardware - electric & RQE mortise lock | 7.00 ea | 0.00 /ea | 0 |
| Hardware - electric dogging & RQE device w trim | 4.00 ea | 0.01 /ea | 0 |
| Hardware - electric latch retract & RQE device w trim | 61.00 ea | 0.00 /ea | 0 |
| Hardware - flushmount auto door bottom | 153.00 ea | 0.00 /ea | 0 |
| Hardware - frame silencers | 2,029.00 ea | 0.00 /ea | 2 |
| Hardware - LBR device w elec trim & RQE | 28.00 ea | 0.00 /ea | 0 |
| Hardware - LBR devise w mech trim & RQE | 28.00 ea | 0.00 /ea | 0 |
| Hardware - magnetic door hold-opens | 56.00 ea | 0.00 /ea | 0 |
| Hardware - mortise lockset | 402.00 ea | 0.00 /ea | 0 |
| Hardware - mortise lockset w "occupied" indication | 41.00 ea | 0.00 /ea | 0 |
| Hardware - mortise lockset w securty function | 150.00 ea | 0.00 /ea | 0 |
| Hardware - perimeter acoustic gasketing | 155.00 ea | 0.00 /ea | 0 |
| Hardware - pushpad actuators | 4.00 ea | 0.01 /ea | 0 |
| Hardware - RIM device w mech trim & CD | 11.00 ea | 0.00 /ea | 0 |
| Hardware - RQE exist bearing device w trim | 36.00 ea | 0.00 /ea | 0 |
| Hardware - set-in & ext hinge fingershields | 30.00 ea | 0.00 /ea | 0 |
| Hardware - set-perimeter gasketing | 152.00 ea | 0.00 /ea | 0 |
| Hardware - set-top & bottom manual flushbolts | 31.00 ea | 0.00 /ea | 0 |
| Hardware - single sided cylinder deadbolt | 128.00 ea | 0.00 /ea | 0 |
| Hardware - small format cylinder core | 972.00 ea | 0.00 /ea | 1 |
| Hardware - SVR device w mech trim & CD | 4.00 ea | 0.01 /ea | 0 |
| Hardware - thru-wire electric hinge | 128.00 ea | 0.00 /ea | 0 |
| Install door & hardware - toilet bldg | 4.00 lvs | 491.01 /lvs | 1,964 |
| 087010 Install Doors and Hardware | | /lvs | 395,756 |
| 087100 Door Hardware | | | |
| Furnish hardware | 802.00 lvs | 681.00 /lvs | 546,162 |
| Hardware sets - interior (HM & Wood doors) - toilet building | 4.00 lvs | 681.01 /lvs | 2,724 |
| 087100 Door Hardware | 761.00 lvs | 721.27 /lvs | 548,886 |
| 090007 Painting | | | |
| Paint HM frame - interior | 711.00 lvs | 175.00 /lvs | 124,425 |
| Paint HM doors - interior at toilet building | 4.00 lvs | 95.00 /lvs | 380 |
| Paint HM frames - at toilet building | 4.00 ea | 105.00 /ea | 420 |
| 090007 Painting | | /gsf | 125,225 |
| 092900 Gypsum Board Assemblies | | | |
| Install HM Frame | 781.00 op | 80.00 /op | 62,480 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| 092900 Gypsum Board Assemblies | | /sf | 62,480 |
| C1020 Interior Doors | 408,500.00 gsf | 5.32 /gsf | 2,171,830 |
| C1030 Specialties/Millwork | | | |
| 055000 Metal Fabrications | | | |
| Auditorium railing at front of balcony, SS short | 0.00 lf | 0.00 /lf | 0 |
| Auditorium railing at bottom balcony aile | 8.00 lf | 300.00 /lf | 2,400 |
| Auditorium railing floor mtd at balcony - side steps only | 22.00 lf | 300.00 /lf | 6,600 |
| Auditorium floor mtd ailes railings balcony(24 loc) | 0.00 lf | 0.00 /lf | 0 |
| Auditorium railing on top of short wall lower level , SS short, radius (6/A8.75) | 81.00 lf | 375.00 /lf | 30,375 |
| Auditorium railing at top of short wall lower level, SS foor mtd hndcp | 38.00 lf | 300.00 /lf | 11,400 |
| Auditorium floor mtd ailes railings lower level (6 loc) | 0.00 lf | 0.00 /lf | 0 |
| Decorative ramp rail, radius at D-lab - wall mtd | 25.00 lf | 175.00 /lf | 4,375 |
| Decorative ramp rail, radius at D-lab - floor mtd | 20.00 lf | 550.00 /lf | 11,000 |
| Straight ladder - auditorium (A2.8), | 102.00 lf | 650.00 /lf | 66,300 |
| Elevator pit ladders | 3.00 ls | 2,600.00 /ls | 7,800 |
| Rail at auditorium catwalks - A2.4E, A3.3E | 730.00 lf | 210.00 /lf | 153,300 |
| Rail at black box catwalks - A2.3E | 180.00 lf | 210.00 /lf | 37,800 |
| Additional misc metals | 408,500.00 gsf | 0.75 /gsf | 306,375 |
| 055000 Metal Fabrications | 408,500.00 gsf | 1.56 /gsf | 637,725 |
| 057300 Decorative Glass Railings | | | |
| Decorative glass railing at Forum/bridge- straight (3/A10.0.2) | 100.00 lf | 445.00 /lf | 44,500 |
| 057300 Decorative Glass Railings | | | 44,500 |
| 057500 Decorative Formed Metal (column covers) | | | |
| Int aluminum column covers say 24" diam - 5/14 28/16 6/24 | 662.00 lf | 310.00 /lf | 205,220 |
| 057500 Decorative Formed Metal (column covers) | 408,500.00 lf | 0.50 /lf | 205,220 |
| 064020 Interior Architectural Woodwork | | | |
| Window sills at borrowed lights- solid surface per 4/A7.1.2 nc | 850.00 lf | 60.00 /lf | 51,000 |
| Window sills at exterior- solid surface per 3/A7.1.2 nc | 2,270.00 lf | 60.00 /lf | 136,200 |
| Framing, circular around Lockers - radius/straight, trim between lockers, wood soffit cap (A8.5.1) was 843' | 825.00 lf | 200.00 /lf | 165,000 |
| Third Floor Overlook (4/A 8.6.5) | 570.00 sf | 110.00 /sf | 62,700 |
| Decorative Stairs & Mezz Railing at Preschool (A10.2.2) railing only nc | 68.00 lf | 50.00 /lf | 3,400 |
| Counter at kitchen/servery - with food service eqp nc | 0.00 lf | 490.00 /lf | 0 |
| Cafeteria Island Counter nc | 70.00 lf | 450.00 /lf | 31,500 |
| Performing Arts Spine Benches (3&9/A 8.6.1) -nc | 313.00 sf | 148.00 /sf | 46,324 |
| Performing Arts Under stair Bench (5/A 8.6.1) -nc | 201.00 sf | 148.00 /sf | 29,748 |
| Library Bench Under Stair - radius (17/A8.6.2) was 126 sf | 139.00 sf | 196.00 /sf | 27,244 |
| Auditorium Balcony Lobby Bench (20/A 8.6.2) was 91 sf | 80.00 sf | 148.00 /sf | 11,840 |
| Courtyard Window Bay Bench (15/A8.6.2) was 172 sf (non-typical) | 126.00 sf | 100.00 /sf | 12,600 |
| Library Bench - mostly radius (13/A8.6.2) was 80 sf | 120.00 sf | 196.00 /sf | 23,520 |
| Work Bars Overlooking Forum (13/A8.6.5) counter/wall panels was 346 sf | 554.00 sf | 110.00 /sf | 60,940 |
| Upper Forum Seating Area (1/A8.6.5) was 408 sf | 791.00 sf | 148.00 /sf | 117,068 |
| Lobby Millwork Pop Out (1/A8.6.5) (prev 186sf) not drawn/new name | 0.00 sf | /sf | |
| Cafeteria Wall Bench (1/A 8.6.1) was 267 | 295.00 sf | 124.00 /sf | 36,580 |
| Preschool Understair Bench (8/A 8.6.1) nc | 175.00 sf | 148.00 /sf | 25,900 |
| Preschool Peg Board (8/A8.6.5) nc | 84.00 sf | 90.00 /sf | 7,560 |
| Lightwell Counter - curved premium (4/A 8.6.8) was 265 lf | 246.00 lf | 500.00 /lf | 123,000 |
| Library Light Cone Counter - curved premium (2/A 8.6.8) - was 93 lf | 84.00 lf | 500.00 /lf | 42,000 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| 064020 Interior Architectural Woodwork | | | |
| Media Circulation Desk (12/A8.6.3) was 22' | 26.00 lf | 1,050.00 /lf | 27,300 |
| Media Circulation Desk - wall shelving (FC 2.3b) nc | 27.00 lf | 300.00 /lf | 8,100 |
| Mass Ave Admin Desk (8/A8.6.3) nc | 13.00 lf | 980.00 /lf | 12,740 |
| First Floor Admin Desk (5/A8.6.3) nc | 10.00 lf | 980.00 /lf | 9,800 |
| Preschool Admin Desk - partially radius (1/A8.6.3) was 25' | 25.00 lf | 1,450.00 /lf | 36,250 |
| Display Cases at Gym - built-in component (6/A8.6.4) nc | 31.00 lf | 480.00 /lf | 14,880 |
| Steam Small Display (9/A 8.6.4) was 7' | 13.25 lf | 479.99 /lf | 6,360 |
| Single Tall Display - built-in component (8/A8.6.4) was 4' | 16.00 lf | 479.99 /lf | 7,680 |
| Double Tall Display - built-in component (7/A8.6.4) nc | 8.00 lf | 480.00 /lf | 3,840 |
| Corridor Display - built-in component (11/A8.6.4) nc | 4.00 lf | 479.99 /lf | 1,920 |
| Auditorium Displays - built-in component (10/A8.6.4) nc | 8.00 lf | 480.00 /lf | 3,840 |
| Library Entry Display - built-in component (12/A8.6.4) nc | 3.00 lf | 479.99 /lf | 1,440 |
| Balcony Entry Display - built-in component (16/A8.6.4) nc | 3.00 lf | 479.99 /lf | 1,440 |
| Balcony Lobby Display - built-in component (14/A8.6.4) was 11' | 15.00 lf | 480.00 /lf | 7,200 |
| Life Skill Cafe counter - curved premium (3/A 8.6.7) nc | 48.00 lf | 1,057.25 /lf | 50,748 |
| Life Skill Cafe counter (3/A 8.6.7) new | 12.00 lf | 800.00 /lf | 9,600 |
| Life Skill Cafe pivot sliding cabinet doors (3/A 8.6.7) nc | 13.00 lf | 800.00 /lf | 10,400 |
| 064020 Interior Architectural Woodwork | 408,500.00 sf | 3.01 /sf | 1,227,662 |
| 070001 Waterproofing, Caulking | | | |
| sealing & caulking - int | 409,272.00 gsf | 0.99 /gsf | 405,179 |
| 070001 Waterproofing, Caulking | | /gsf | 405,179 |
| 080007 Glazing | | | |
| Mirror, frameless at ALT PE (1 room) | 431.00 sf | 38.00 /sf | 16,378 |
| Mirror, frameless - dressing rooms (3 loc) | 300.00 sf | 38.00 /sf | 11,400 |
| Mirror glass at typ practiced room (8 loc) | 107.00 sf | 38.00 /sf | 4,066 |
| Double sided mirror at PS Observation | 2.00 ls | 500.00 /ls | 1,000 |
| 080007 Glazing | | /gsf | 32,844 |
| 101100 Visual Display Surfaces | | | |
| Tackboards - 3' | 9.00 lf | 216.00 /lf | 1,944 |
| Tackboards - 4' | 112.00 ea | 288.00 /ea | 32,256 |
| Tackboards - 8' | 24.00 ea | 576.00 /ea | 13,824 |
| Markerboards - 6' | 30.00 ea | 432.00 /ea | 12,960 |
| Markerboards - 6' lined | 6.00 ea | 432.00 /ea | 2,592 |
| Markerboards - 8' | 200.00 ea | 576.00 /ea | 115,200 |
| Markerboards - 8' lined | 8.00 ea | 576.00 /ea | 4,608 |
| Markerboards - 10' | 130.00 ea | 720.00 /ea | 93,600 |
| Markerboards - 10' lined | 10.00 ea | 720.00 /ea | 7,200 |
| Markerboards - 12' | 24.00 ea | 864.00 /ea | 20,736 |
| Markerboards - 12' lined | 24.00 ea | 864.00 /ea | 20,736 |
| Markerboards - 16' lined | 32.00 ea | 1,152.00 /ea | 36,864 |
| 101100 Visual Display Surfaces | 408,500.00 gsf | 0.89 /gsf | 362,520 |
| 101400 Signage | | | |
| Building signage and graphics- interior | 408,500.00 gsf | 0.50 /gsf | 204,250 |
| Vinyl Grapic Wall Mural at Cafeteria | 862.00 sf | 12.00 /sf | 10,344 |
| Vinyl Grapic Wall Mural at PreK, behind stairs 41'x20'h | 820.00 sf | 12.00 /sf | 9,840 |
| Vinyl Graphic at auditorium | 2,000.00 sf | 12.00 /sf | 24,000 |
| Vinyl Grapic Wall Mural at Music Entry Stairs (5/A12.8.6) | 1,230.00 sf | 12.00 /sf | 14,760 |
| Vinyl Grapic Wall - large gym (2/A12.5.2) | 875.00 sf | 12.00 /sf | 10,500 |
| Vinyl Grapic Wall - at black box | 1,120.00 sf | 12.00 /sf | 13,440 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|----------------|
| 101400 Signage | 408,500.00 gsf | 0.70 /gsf | 287,134 |
| 102100 Toilet Compartments and Cubicles | | | |
| Toilet partitions - handicap | 8.00 ea | 2,541.00 /ea | 20,328 |
| Toilet partitions - regular | 39.00 ea | 1,786.40 /ea | 69,670 |
| Toilet partitions - urinal screen | 18.00 ea | 654.50 /ea | 11,781 |
| Toilet partitions - handicap | 2.00 ea | 2,541.00 /ea | 5,082 |
| Toilet partitions - regular | 4.00 ea | 1,786.40 /ea | 7,146 |
| Toilet partitions - urinal screen | 1.00 ea | 654.50 /ea | 655 |
| 102100 Toilet Compartments and Cubicles | 408,500.00 gsf | 0.28 /gsf | 114,661 |
| 102123 Cubicle Curtains and Tracts | | | |
| Track and curtain (preschool nurse) | 1.00 bed | 2,500.00 /bed | 2,500 |
| Track and curtain (LABBB nurse) | 1.00 bed | 2,500.00 /bed | 2,500 |
| Track and curtain (HS nurse) | 6.00 bed | 2,500.00 /bed | 15,000 |
| 102123 Cubicle Curtains and Tracts | 408,500.00 gsf | 0.05 /gsf | 20,000 |
| 102610 Corner Guards | | | |
| Corner guards - at kitchen | 1.00 ls | 15,000.00 /ls | 15,000 |
| 102610 Corner Guards | 408,500.00 gsf | 0.04 /gsf | 15,000 |
| 102800 Toilet Accessories | | | |
| Toilet paper dispenser, install only | 116.00 ea | 90.00 /ea | 10,440 |
| Sanitary napkin disposal | 120.00 ea | 214.00 /ea | 25,680 |
| Toilet paper dispenser furnish only | 7.00 ea | 65.00 /ea | 455 |
| Sanitary napkin disposal | 4.00 ea | 213.95 /ea | 856 |
| Grab bars (42") furnish and install only | 136.00 ea | 125.00 /ea | 17,000 |
| Grab bars (42") furnish and install | 3.00 ea | 125.01 /ea | 375 |
| Soap dispenser - surface mounted, install only | 120.00 ea | 45.00 /ea | 5,400 |
| Soap dispenser - surface mounted install only | 5.00 ea | 44.99 /ea | 225 |
| Waste receptacle - recessed furnish only | 91.00 ea | 137.50 /ea | 12,512 |
| HD1 hand dryers furnish only | 28.00 ea | 458.86 /ea | 12,848 |
| Waste receptacle - recessed (1 per single bathroom 2 per gang bathroom) furnish only | 3.00 ea | 224.99 /ea | 675 |
| HD1 hand dryers (1 per single bathroom 2 per gang bathroom) furnish only | 3.00 ea | 550.00 /ea | 1,650 |
| Framed mirrors (18" x 36") furnish only | 120.00 ea | 225.00 /ea | 27,000 |
| Framed mirrors (18" x 36") furnish only | 5.00 ea | 225.01 /ea | 1,125 |
| Shower rod and curtain furnish only | 13.00 ea | 178.20 /ea | 2,317 |
| Shower seat - folding furnish only | 7.00 ea | 400.00 /ea | 2,800 |
| Janitors/mop sink - furnish only | 12.00 ea | 275.00 /ea | 3,300 |
| Janitors/mop sink furnish only | 1.00 ea | 275.00 /ea | 275 |
| 102800 Toilet Accessories | 408,500.00 gsf | 0.31 /gsf | 124,933 |
| 104400 Fire Protection Specialties | | | |
| Multi-purpose dry chemical extinguishers & cabinet | 120.00 ea | 300.00 /ea | 36,000 |
| 104400 Fire Protection Specialties | 408,500.00 gsf | 0.09 /gsf | 36,000 |
| 105100 Lockers | | | |
| benches | 25.00 ea | 440.00 /ea | 11,000 |
| Lockers, 1 openings - locker rooms | 100.00 ea | 375.00 /ea | 37,500 |
| Lockers, 5 openings - locker rooms | 310.00 ea | 475.00 /ea | 147,250 |
| Lockers, 3 openings - typ classroom corridor | 671.00 ea | 425.00 /ea | 285,175 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-----------------------|-------------------|
| 105100 Lockers | 408,500.00 gsf | 1.18 /gsf | 480,925 |
| C1030 Specialties/Millwork | 408,500.00 gsf | 9.78 /gsf | 3,994,303 |
| C10 Interior Construction | 408,500.00 gsf | 42.84 /gsf | 17,501,515 |
| C20 Stairs | | | |
| C2010 Stair Construction | | | |
| 033045 Concrete - SOD | | | |
| Concrete Riggs - pan stairs | 1.00 ls | 60,000.00 /ls | 60,000 |
| Place & finish pan fill stairs phase 2 only | 25.00 fl | 2,906.12 /fl | 72,653 |
| 033045 Concrete - SOD | 27.00 sf | 4,913.07 /sf | 132,653 |
| 055000 Metal Fabrications | | | |
| Egress stair 1- painted mesh rails - L1 to roof (6 fl) - 6'-6"w | 138.00 rs | 1,140.00 /rs | 157,320 |
| Egress stair 2- without rails - L2 to roof (4 fl) - 6'-6"w | 98.00 rs | /rs | |
| Egress stair 3- without rails - L2 to L5 (3 fl) - 6'w | 73.00 rs | /rs | |
| Egress stair 9 - painted mesh rails - L2 to L3 auditorium (1 fl) - 4'w | 27.00 rs | 1,400.00 /rs | 37,800 |
| Egress stair 4- painted mesh rails - L1 to L5 (5 fl) - 6'w | 113.00 rs | 1,140.00 /rs | 128,820 |
| Egress stair 6 - painted mesh rails - L1 to L1+ (1 fl) - 4'-6" | 20.00 rs | 1,140.00 /rs | 22,800 |
| Egress stair 8- painted mesh rails - L1 to L2 (2 fl) - 4'-6" | 40.00 rs | 1,140.00 /rs | 45,600 |
| Egress stair 7 (gym)- painted mesh rails - L1 to L2 (2 fl) -5'w | 40.00 rs | 1,140.00 /rs | 45,600 |
| Egress stair 5 (gym)- painted mesh rails - L1 to L2 (2 fl) - 5'w | 40.00 rs | 1,140.00 /rs | 45,600 |
| Stair 10 Custom stairs L2 to L3 music wing - not incl rail (1 fl) - 5'-6"w | 27.00 rs | 1,140.00 /rs | 30,780 |
| Stair 10 custom concealed railing to support wood - stairs | 35.00 lf | 200.00 /lf | 7,000 |
| Stair 10 custom concealed railing to support wood - adjacent half wall | 57.00 lf | 200.00 /lf | 11,400 |
| Stair 10 wall mtd rail | 70.00 lf | 150.00 /lf | 10,500 |
| Stair 12 Custom stairs L3 to L4 library - not incl rail (1 fl) - 4'-6"w | 23.00 rs | 1,500.00 /rs | 34,500 |
| Stair 12 custom concealed railing to support wood - stairs | 66.00 lf | 0.01 /lf | 1 |
| Stair 12 curved glass rail | 35.00 lf | 600.00 /lf | 21,000 |
| Stair 12 wall mtd rail | 66.00 lf | 150.00 /lf | 9,900 |
| Stair 13 wall mtd rail | 52.00 lf | 150.00 /lf | 7,800 |
| Stair 13 Custom stairs L1 to L1+ at Guidance - not incl rail (1 fl) - 4'-6"w | 20.00 rs | 1,000.00 /rs | 20,000 |
| Stair 13 custom concealed railing to support wood - stairs | 26.00 lf | 0.01 /lf | 0 |
| Stair 13 custom concealed railing to support wood - adjacent half wall | 52.00 lf | 200.00 /lf | 10,400 |
| Stair 11 wall mtd rail | 58.00 lf | 150.00 /lf | 8,700 |
| Stair 11 Custom stairs L1 to L1+ at PreK - not incl rail (1 fl) - 5'w | 20.00 rs | 925.00 /rs | 18,500 |
| Stair 11 custom concealed railing to support wood - stairs | 29.00 lf | 0.01 /lf | 0 |
| Stair 11 custom concealed railing to support wood - adjacent half wall | 40.00 lf | 200.00 /lf | 8,000 |
| Stepped seating/stairs at Forum L1 to L2- not incl rail (2 fl) | 2.00 fl | 90,000.00 /fl | 180,000 |
| Stepped seating/stairs at Forum L1 to L2- wall mtd rail SS | 60.00 lf | 225.00 /lf | 13,500 |
| Stepped seating/stairs at Forum L1 to L2- ailes rail SS | 52.00 lf | 450.00 /lf | 23,400 |
| Stepped seating/stairs custom concealed railing to support wood - stairs | 120.00 lf | 225.00 /lf | 27,000 |
| Stepped seating/stairs custom concealed railing to support wood - adjacent half wall | 95.00 lf | 225.00 /lf | 21,375 |
| Egress stair 2- rails only - L2 to roof (4 fl) - 6'-6"w | 98.00 rs | 425.00 /rs | 41,650 |
| Egress stair 3- rails only - L2 to L5 (3 fl) - 6'w | 73.00 rs | 425.00 /rs | 31,025 |
| Add for stainless steel handrail | 1,557.50 lf | 60.00 /lf | 93,450 |
| Ships ladder at stair 12 | 1.00 ls | 15,000.00 /ls | 15,000 |
| 055000 Metal Fabrications | 32.00 gsf | 35,263.16 /gsf | 1,128,421 |
| 064020 Interior Architectural Woodwork | | | |
| Stair 7 - wood cap at rail | 78.00 lf | 30.00 /lf | 2,340 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|---------------------|------------------|
| 064020 Interior Architectural Woodwork | | | |
| Stair 6 - wood cap at rail (33x2 + 60) | 126.00 lf | 30.00 /lf | 3,780 |
| Stair 5 - wood cap at rail (39 + 57) | 96.00 lf | 30.00 /lf | 2,880 |
| Stair 11 - wood cap at rail (29 + 40) | 69.00 lf | 30.00 /lf | 2,070 |
| Forum stairs - wood cap at rail (60x2 + 55) | 175.00 lf | 60.00 /lf | 10,500 |
| Forum stairs - wood paneling at rail - horiz 55x11 | 550.00 sf | 80.00 /sf | 44,000 |
| Forum stairs - wood paneling at rail - sloped 120 x 12 | 1,440.00 sf | 80.00 /sf | 115,200 |
| 064020 Interior Architectural Woodwork | | /sf | 180,770 |
| <hr/> | | | |
| C2010 Stair Construction | 408,500.00 gsf | 3.53 /gsf | 1,441,844 |
| <hr/> | | | |
| C2020 Stair Finishes | | | |
| 064020 Interior Architectural Woodwork | | | |
| Wood resin composite treads/seating forum stairs | 963.00 sf | 70.00 /sf | 67,410 |
| Wood resin composite risers - 6" | 270.00 lf | 70.00 /lf | 18,900 |
| Wood resin composite risers - 18" | 203.00 lf | 110.00 /lf | 22,330 |
| 064020 Interior Architectural Woodwork | | /sf | 108,640 |
| <hr/> | | | |
| 090005 Resilient Flooring (TS) | | | |
| RBRF Rubber treads and risers | 4,002.00 lf | 40.00 /lf | 160,080 |
| 090005 Resilient Flooring (TS) | | /gsf | 160,080 |
| <hr/> | | | |
| 090007 Painting | | | |
| Paint Stairs | 26.00 fl | 2,000.00 /fl | 52,000 |
| 090007 Painting | | /gsf | 52,000 |
| <hr/> | | | |
| 096625 Precast Terrazzo | | | |
| Precast Terrazzo stair treads&riser (1 1/2" thick) Forum Stairs | 384.00 lf | 175.00 /lf | 67,200 |
| 096625 Precast Terrazzo | | | 67,200 |
| <hr/> | | | |
| 101500 Photoluminescent Safety Products | | | |
| Photoluminescent safety at stairs | 26.00 fl | 2,400.00 /fl | 62,400 |
| 101500 Photoluminescent Safety Products | 26.00 fl | 2,400.00 /fl | 62,400 |
| <hr/> | | | |
| C2020 Stair Finishes | 408,500.00 gsf | 1.10 /gsf | 450,320 |
| <hr/> | | | |
| C20 Stairs | 408,500.00 gsf | 4.63 /gsf | 1,892,164 |
| <hr/> | | | |
| C30 Interior Finishes | | | |
| C3010 Wall Finishes | | | |
| 064020 Interior Architectural Woodwork | | | |
| Tackable Fiber Panel 064020.48 nc | 3,801.00 sf | 18.00 /sf | 68,418 |
| Multi-sensory wall - interactive maple recessed pegboard - PreK multipurpose nc | 110.00 sf | 100.00 /sf | 11,000 |
| Wall panel at stair at level 1 entry reception 2/A12.8.0.b - 20'x16'h nc | 320.00 sf | 78.00 /sf | 24,960 |
| 3M panel at locker islands -38.5'x6' x 4 loc (11/A8.51) prev 809 sf | 924.00 sf | 160.00 /sf | 147,840 |
| Auditorium wood panel at balcony fascia per A 8.7.4 | 1,805.00 sf | 110.00 /sf | 198,550 |
| Auditorium wood panel at lower level half cap and trim | 168.00 lf | 75.00 /lf | 12,600 |
| Auditorium proscenium wall paneling - complete surround | 786.00 sf | 90.00 /sf | 70,740 |
| Wall panel at stair at music entry 4,7/A10.2.1 nc | 720.00 sf | 78.00 /sf | 56,160 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|---------------------|------------------|------------------|
| 064020 Interior Architectural Woodwork | | | |
| Auditorium Entry wood facets (A 8.6.9) | 755.00 sf | 88.00 /sf | 66,440 |
| Auditorium Entry wood surround (2/A 8.6.9) | 414.00 sf | 88.00 /sf | 36,432 |
| Auditorium wood panel at auditorium walls (A 8.7.1 & A 8.7.2) | 3,000.00 sf | 88.00 /sf | 264,000 |
| Auditorium angled wood panel at auditorium walls (A 8.7.1 & A 8.7.2) | 297.00 sf | 88.00 /sf | 26,136 |
| Wall paneling 064020.44 at Upper Auditorium Balcony Entrance (A 8.7.7) | 544.00 sf | 78.00 /sf | 42,432 |
| Wall paneling 064020.44 at S Media Center (A 8.7.7) new | 784.00 sf | 78.00 /sf | 61,152 |
| Wall paneling 064020.44 at E Media Center (A 8.7.7) new | 419.00 sf | 78.00 /sf | 32,682 |
| Wall paneling 064020.44 at D Lab (A 8.7.7) | 389.00 sf | 78.00 /sf | 30,342 |
| 064020 Interior Architectural Woodwork | | /sf | 1,149,884 |
| 066400 FRP Paneling | | | |
| FRP - Fiberglass Reinforced Plastic Paneling 10'4" at kitchen | 1,119.00 sf | 13.86 /sf | 15,509 |
| FRP - Fiberglass Reinforced Plastic Paneling 8'4" closets | 6,144.00 sf | 0.00 /sf | 6 |
| 066400 FRP Paneling | | /gsf | 15,515 |
| 090007 Painting | | | |
| Paint bathroom walls | 950.00 sf | 1.25 /sf | 1,188 |
| Paint drywall partitions | 520,000.00 sf | 0.90 /sf | 468,000 |
| Premium for high performance paint | 30,000.00 sf | 0.60 /sf | 18,000 |
| Premium for high performance paint at closets | 65,000.00 sf | 0.60 /sf | 39,000 |
| Stencil on walls | 1.00 ls | 20,000.00 /ls | 20,000 |
| Paint CMU - interior - toilet bldg | 3,302.00 sf | 1.10 /sf | 3,632 |
| Custom graphics | 0.01 allw | 1.00 /allw | 0 |
| 090007 Painting | | /gsf | 549,820 |
| 093000 Tiling (TS) | | | |
| Wall tile at staff bathroom - 3'-4" (255 lf) | 850.00 sf | 21.00 /sf | 17,850 |
| Wall tile at preschool - 4'-4" (1,256 lf) | 5,446.00 sf | 21.00 /sf | 114,366 |
| Wall tile at corridors - 4'8" (mostly) (6,920 lf) | 32,310.00 sf | 21.00 /sf | 678,510 |
| Wall tile at bathrooms - 6'-10" (3,405 lf) | 24,405.00 sf | 21.00 /sf | 512,505 |
| Wall tile at cafeteria millwork - 3'-6" | 438.00 sf | 45.00 /sf | 19,710 |
| Wall tile at furum stair - 3'-2" | 263.00 sf | 45.00 /sf | 11,835 |
| Wall tile at lightwells | 1,390.00 sf | 50.00 /sf | 69,500 |
| Premium for tile graphics | 1.00 ls | 8,000.00 /ls | 8,000 |
| 093000 Tiling (TS) | 65,185.00 sf | 21.97 /sf | 1,432,276 |
| 098400 Acoustic Room Components | | | |
| SAFS at inside of light wells SonaSpray fc - cones - 32' x 32' x 2 | 2,048.00 sf | 9.00 /sf | 18,432 |
| SAFS at inside of light wells - ovals 52' x 78 x 2 | 8,112.00 sf | 9.00 /sf | 73,008 |
| SAFS at inside of light wells - trapaziod 47' x 164 | 7,708.00 sf | 8.00 /sf | 61,664 |
| SAFS at inside of light wells - adj to gym 64' x 95' | 6,080.00 sf | 8.00 /sf | 48,640 |
| AWP1 Wood fiber panels Tetcum Finale 098400.08 | 6,844.00 sf | 28.00 /sf | 191,632 |
| AWP1 Wood fiber panels - Band, Chorus & Ensemble | 2,580.00 sf | 28.00 /sf | 72,240 |
| AWP1 Wood fiber panels - Practice Rooms (8 rms) | 864.00 sf | 28.00 /sf | 24,192 |
| AWP1 Wood Fiber Panel - Production Lab & Studio | 1,016.00 sf | 28.00 /sf | 28,448 |
| AWP2 Fiberglass Acoustic Wall Panel - Library | 990.00 sf | 35.00 /sf | 34,650 |
| AWP2 Fiberglass Acoustic Wall Panel - Language Labs | 553.00 sf | 35.00 /sf | 19,355 |
| AWP2 Fiberglass Acoustic Wall Panel - DLab | 455.00 sf | 35.00 /sf | 15,925 |
| AWP2 Fiberglass Acoustical Panel Type 2 Fusco Facade | 453.00 sf | 50.00 /sf | 22,650 |
| AWP3 Black arch fiberglass boards at Performing Arts | 1,200.00 sf | 12.00 /sf | 14,400 |
| Paint grade wood acoustical panels at auditorium | 2,000.00 sf | 85.00 /sf | 170,000 |
| 098400 Acoustic Room Components | | /sf | 795,236 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| C3010 Wall Finishes | 408,500.00 gsf | 9.65 /gsf | 3,942,731 |
| C3020 Floor Finishes | | | |
| 015020 Trade Support | | | |
| Final Cleaning | 408,000.00 sf | 1.00 /sf | 408,000 |
| Credit for design contingency | (3.00) % | 10,059.00 /% | (30,177) |
| 015020 Trade Support | | /gsf | 377,823 |
| 033560 Concrete Densifier/Hardener/Sealer | | | |
| Exp-C exposed concrete/hardener sealer | 24,233.00 sf | 2.20 /sf | 53,313 |
| 033560 Concrete Densifier/Hardener/Sealer | 22,856.00 gsf | 2.33 /gsf | 53,313 |
| 033650 Concrete Finishes (polished concrete) | | | |
| AFC-1 Arch finished floor type 1, polished & stained | 29,295.00 sf | 11.00 /sf | 322,245 |
| AFC-2 Arch finished floor type 2, polished, unstained | 12,612.00 sf | 9.80 /sf | 123,598 |
| 033650 Concrete Finishes (polished concrete) | 21,968.00 sf | 20.30 /sf | 445,843 |
| 064020 Interior Architectural Woodwork | | | |
| Wood resin composite floor - level 2 | 384.00 sf | 45.00 /sf | 17,280 |
| 064020 Interior Architectural Woodwork | 1,104.00 sf | 15.65 /sf | 17,280 |
| 090005 Resilient Flooring (TS) | | | |
| RFF Resilient Tile Flocked flooring (Forbo Flotex) Life Skills | 1,155.00 sf | 7.50 /sf | 8,663 |
| Linoleum Sheet flooring Forbo Marmoleum MCS (PreK only) | 5,000.00 sf | 7.00 /sf | 35,000 |
| RF - Linoleum tile (Forbo MCT) | 228,779.00 sf | 4.80 /sf | 1,098,139 |
| RF - Linoleum tile premium for high moisture adhesive | 233,779.00 sf | 0.75 /sf | 175,334 |
| Floor prep | 233,779.00 sf | 0.50 /sf | 116,890 |
| RB - Rubber base | 64,629.00 lf | 3.50 /lf | 226,202 |
| RF - Linoleum tile/sheet premium for water jet cutting (Preschool corridor leaves) | 1.00 ls | 25,000.00 /ls | 25,000 |
| 090005 Resilient Flooring (TS) | | /gsf | 1,685,227 |
| 090160 Vapor Mitigation at Slabs | | | |
| Moisture mitigation at resilient flooring n/r | 253,381.00 sf | 0.00 /sf | 253 |
| Moisture mitigation at carpet n/r | 23,463.00 sf | 0.00 /sf | 23 |
| Moisture mitigation and leveling at wood athletic flooring | 16,253.00 sf | 5.10 /sf | 82,890 |
| Moisture mitigation at stage flooring | 5,203.00 sf | 5.10 /sf | 26,535 |
| 090160 Vapor Mitigation at Slabs | 35,639.00 sf | 3.08 /sf | 109,702 |
| 096400 Stage Wood Flooring | | | |
| SWF - Stage Wood Flooring - auditorium stage | 2,572.00 sf | 20.00 /sf | 51,440 |
| SWF - Stage Wood Flooring - Performing Arts | 2,631.00 sf | 20.00 /sf | 52,620 |
| 096400 Stage Wood Flooring | 5,098.00 sf | 20.41 /sf | 104,060 |
| 096466 Wood Athletic Flooring | | | |
| VCB - Rubber Ventilating Cove Base (used with WAF & SWF) | 987.00 lf | 10.00 /lf | 9,870 |
| WAF - Wood Athletic Flooring (Gym) | 16,253.00 sf | 18.00 /sf | 292,554 |
| 096466 Wood Athletic Flooring | 16,038.00 sf | 18.86 /sf | 302,424 |
| 096565 Poured Athletic Flooring | | | |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| 096565 Poured Athletic Flooring | | | |
| RAF1 - Resilient athletic flooring type 1 Taraflex Sport M plus, (Part C) | 1,464.00 sf | 10.00 /sf | 14,640 |
| RAF3 - Resilient athletic flooring type 3, poured seamless, with shock pad (Part A) | 9,917.00 sf | 13.00 /sf | 128,921 |
| 096565 Poured Athletic Flooring | | | 143,561 |
| 096566 Resilient Athletic Flooring (part of resilient TB) | | | |
| Rubber floor tile (Elevators) | 112.00 sf | 14.00 /sf | 1,568 |
| RAF2 - Resilient athletic flooring type 2, 3/8" Rubber(Part A) | 3,064.00 sf | 10.00 /sf | 30,640 |
| 096566 Resilient Athletic Flooring (part of resilient TB) | 14,503.00 gsf | 2.22 /gsf | 32,208 |
| 096700 Fluid-Applied Flooring | | | |
| RSF - Resinous Flooring System | 11,512.00 sf | 14.00 /sf | 161,168 |
| RSFB - 4" Resinous flooring integral base | 4,551.00 lf | 5.00 /lf | 22,755 |
| 096700 Fluid-Applied Flooring | 12,841.00 sf | 14.32 /sf | 183,923 |
| 096820 Carpeting | | | |
| CPT Tile | 16,967.00 sf | 6.00 /sf | 101,802 |
| CPT Roll goods - Auditorium and D-Lab | 6,496.00 sf | 6.00 /sf | 38,976 |
| Floor prep | 23,463.00 sf | 0.50 /sf | 11,732 |
| 096820 Carpeting | 26,954.00 sf | 5.66 /sf | 152,510 |
| C3020 Floor Finishes | 408,500.00 gsf | 8.83 /gsf | 3,607,873 |
| C3030 Ceiling Finishes | | | |
| 015020 Trade Support | | | |
| Staging at auditorium | 10,770.00 sf | 20.00 /sf | 215,400 |
| 015020 Trade Support | | /gsf | 215,400 |
| 064020 Interior Architectural Woodwork | | | |
| Acoustical wood slat ceiling hung at auditorium (A 8.7.3) | 3,546.00 sf | 85.00 /sf | 301,410 |
| 064020 Interior Architectural Woodwork | | /sf | 301,410 |
| 090003 Acoustical Tile (TS) | | | |
| Wood Plank System - C 6 (prev 1,152sf) | 1,094.00 sf | 40.00 /sf | 43,760 |
| Acoustical Ceiling Suspension System - C 1A, 2'x2' Armstrong Calla 2820/2821 (prev 18,071sf) | 17,817.00 sf | 5.40 /sf | 96,212 |
| Acoustical Ceiling Suspension System - C 1A, 2'x4' Armstrong Calla 2820/2821 (prev 144,685sf) | 162,171.00 sf | 5.30 /sf | 859,506 |
| Acoustical Ceiling Suspension System - C 1B, clouds USG Mars ClimaPlus 2'x6' (prev 4,959sf) | 4,045.00 sf | 8.00 /sf | 32,360 |
| Acoustical Ceiling Suspension System - C 1B, 2'x6' USG Mars ClimaPlus (prev 29,398sf) | 24,145.00 sf | 8.00 /sf | 193,160 |
| Acoustical Ceiling Suspension System - C 1B, 2'x6', offset USG Mars ClimaPlus (prev 57,795sf) | 57,249.00 sf | 8.00 /sf | 457,992 |
| Acoustical Ceiling Suspension System - C 1C, 2'x6' Armstrong, Optima 3161 (prev 4,187sf) | 11,420.00 sf | 8.00 /sf | 91,360 |
| <i>Acoustical Ceiling Suspension System - C 1C, 2'x6', offset Armstrong, Optima 3161 (prev 8,076sf) not drawn</i> | <i>0.00 sf</i> | <i>/sf</i> | |
| Acoustic Ceiling Suspension System - Black Tile and Grid - C 1D, 2'x2' | 248.00 sf | 8.50 /sf | 2,108 |
| Acoustic Ceiling Suspension System - Washable - C 1E, 2'x4' (prev 2,641sf) | 2,223.00 sf | 7.25 /sf | 16,117 |
| Acoustic Gypsum Lay-in Suspension System - C 1F, 2'x2' (prev 3,373sf) | 2,583.00 sf | 4.60 /sf | 11,882 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|-------------------|
| 090003 Acoustical Tile (TS) | | | |
| Acoustic Gypsum Lay-in Suspension System - C 1F, 2'x4' (prev 7,741sf) | 6,570.00 sf | 4.50 /sf | 29,565 |
| Acoustic Ceiling Suspension System w Pyramid Diffser - C 1G, 4'x4' (prev 4,998sf) | 4,879.00 sf | 35.00 /sf | 170,765 |
| Acoustic Ceiling Suspension System - C 1H, 2'x4' (prev 23,155sf) | 14,400.00 sf | 5.40 /sf | 77,760 |
| Axiom trim - 6" (prev 1,134lf) | 1,200.00 lf | 40.00 /lf | 48,000 |
| Wood Baffle, felt - C 4A - 12" oc (prev 12,548sf) | 6,510.00 sf | 40.00 /sf | 260,400 |
| Wood Baffle, wood baffel - C 4B | 8,047.00 sf | 56.43 /sf | 454,092 |
| 3D Solid Ceiling Tile System - C 5A (prev 1,871sf) not drawn | 1,871.00 sf | 45.00 /sf | 84,195 |
| 3D Open Ceiling tile System - C 5B (prev332sf) | 354.00 sf | 45.00 /sf | 15,930 |
| Extruded alum light edge detail on A3.7 | 6,000.00 lf | 30.00 /lf | 180,000 |
| 090003 Acoustical Tile (TS) | | /gsf | 3,125,164 |
| 090007 Painting | | | |
| Paint drywall ceilings & soffits (prev 53,068sf) | 47,239.00 sf | 0.83 /sf | 38,972 |
| Paint drywall ceilings | 623.00 sf | 1.10 /sf | 685 |
| Paint exposed ceilings - no K13 (prev 50,441sf) | 56,270.00 sf | 1.65 /sf | 92,846 |
| 090007 Painting | | /gsf | 132,503 |
| 092900 Gypsum Board Assemblies | | | |
| Gypsum Board Ceiling - C 2A (prev 25,819sf) | 25,819.00 sf | 12.00 /sf | 309,828 |
| Sloped ceilings at underside of stairs | 5,233.00 sf | 14.00 /sf | 73,262 |
| Acoustically Isolated Suspended Gypsum Board - C 2B 2 layer + batt insul | 14,061.00 sf | 28.00 /sf | 393,708 |
| GWB soffit vert - one sided (horiz with ceiling above) - 5' typ | 4,100.00 lf | 80.00 /lf | 328,000 |
| GWB soffit vert - two sided - 5' typ | 1,109.00 lf | 96.00 /lf | 106,464 |
| GWB soffit vert - one sided at skylights (prev 563lf) | 1,680.00 lf | 40.00 /lf | 67,200 |
| GWB soffit horiz | 3,645.00 sf | 12.00 /sf | 43,740 |
| 092900 Gypsum Board Assemblies | 408,500.00 sf | 3.24 /sf | 1,322,202 |
| 092910 Direct Applied Finish System (DAFS) | | | |
| Gypsum board ceilings - C 2A | 623.00 sf | 9.00 /sf | 5,607 |
| 092910 Direct Applied Finish System (DAFS) | | /sf | 5,607 |
| 098400 Acoustic Room Components | | | |
| Spray Applied Acoustic Treatment - 098400 - C 3 (prev 17,249sf) | 15,500.00 sf | 6.00 /sf | 93,000 |
| Ceiling reflector with fiber reinforced gel coat finish at auditorium (A 8.7.3) | 133.00 sf | 90.00 /sf | 11,970 |
| Fabric wrap on wall | 320.00 sf | 55.00 /sf | 17,600 |
| Polisurb | 570.00 sf | 18.00 /sf | 10,260 |
| Absorption panel above wood baffes | 1,000.00 sf | 18.00 /sf | 18,000 |
| 098400 Acoustic Room Components | 38,701.00 sf | 3.90 /sf | 150,830 |
| C3030 Ceiling Finishes | 408,500.00 gsf | 12.86 /gsf | 5,253,116 |
| C30 Interior Finishes | 408,500.00 gsf | 31.34 /gsf | 12,803,720 |
| C Interiors | 408,500.00 gsf | 78.82 /gsf | 32,197,400 |

D Services**D10 Conveying Systems**

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|----------------------|----------------|
| D1010 Elevators & Lifts | | | |
| 142400 Election Traction Elevators | | | |
| B Wing elevator - MRL - cab and machine - 4000# | 1.00 ls | 75,000.00 /ls | 75,000 |
| B Wing elevators - MRL stop - 4000# | 6.00 stop | 35,000.00 /stop | 210,000 |
| C Wing elevators - MRL - cab and machine - 3500# (2 door) | 1.00 ls | 70,000.00 /ls | 70,000 |
| C Wing elevators - MRL stop - 3500# | 3.00 stop | 35,000.00 /stop | 105,000 |
| C Wing elevators - MRL stop - 3500# - 2nd door at ground floor | 1.00 stop | 18,000.00 /stop | 18,000 |
| D Wing elevators - MRL - cab and machine - 3500#, 1 door | 1.00 ls | 70,000.00 /ls | 70,000 |
| D Wing elevators - MRL stop - 3500# | 4.00 stop | 35,000.00 /stop | 140,000 |
| 142400 Election Traction Elevators | 14.00 st | 49,142.86 /st | 688,000 |
| 142600 Limited-Use/Limited-Application Elevators | | | |
| Wheelchair lift | 1.00 ls | 34,000.00 /ls | 34,000 |
| Custom panels | 1.00 ls | 2,500.00 /ls | 2,500 |
| 142600 Limited-Use/Limited-Application Elevators | 1.00 ls | 36,500.00 /ls | 36,500 |
| D1010 Elevators & Lifts | 408,500.00 gsf | 1.77 /gsf | 724,500 |
| D10 Conveying Systems | 408,500.00 gsf | 1.77 /gsf | 724,500 |
| D20 Plumbing | | | |
| D20 Plumbing | | | |
| 220005 Plumbing - Misc | | | |
| Laborer for trade support - Plumbing | 20.00 wks | 4,334.00 /wks | 86,680 |
| Plbg contractor permits, as-builts, coring, fire stopping) | 408,500.00 sf | 1.07 /sf | 437,095 |
| General requirements (lump sum) | 1.00 ls | 2,500.00 /ls | 2,500 |
| Plumbing contractor 3D/BIM costs | 3.00 ph | 7,500.00 /ph | 22,500 |
| Project management | 3.00 ph | 20,000.00 /ph | 60,000 |
| Premium for phasing on project | 3.00 ph | 40,000.00 /ph | 120,000 |
| Commissioning support/lump sum | 3.00 ph | 1,000.00 /ph | 3,000 |
| 220005 Plumbing - Misc | 408,500.00 gsf | 1.79 /gsf | 731,775 |
| 220700 Plumbing Insulation | | | |
| Insulation/copper pipe/fiberglass | 23,990.00 lf | 8.18 /lf | 196,239 |
| Insulation/copper pipe/fiberglass - toilet facility | 385.00 lf | 8.18 /lf | 3,149 |
| Insulation/rainleader pipe/fiberglass/horiz. & vert. | 6,950.00 lf | 7.03 /lf | 48,831 |
| 220700 Plumbing Insulation | 408,500.00 gsf | 0.61 /gsf | 248,219 |
| 221000 Plumbing Facility Water Distribution | | | |
| Water meter w/remote readout - irrigation | 5.00 ea | 1,257.68 /ea | 6,288 |
| Water meter w/remote readout - 3" | 2.00 ea | 2,111.30 /ea | 4,223 |
| Water meter w/remote readout - 3" - toilet facility | 1.00 ea | 2,111.30 /ea | 2,111 |
| Backflow preventer/RPZ-BFP - 2" | 1.00 ea | 1,657.68 /ea | 1,658 |
| Backflow preventer/RPZ-BFP - 3" - toilet facility | 1.00 ea | 1,836.30 /ea | 1,836 |
| Backflow preventer/BFP - 1" HVAC makeup | 2.00 ea | 201.54 /ea | 403 |
| Backflow preventer/mop sink | 17.00 ea | 206.05 /ea | 3,503 |
| Backflow preventer/irrigation | 5.00 ea | 206.05 /ea | 1,030 |
| Recirculation pump/bronze | 4.00 ea | 727.20 /ea | 2,909 |
| Recirculation pump/bronze - lab | 1.00 ea | 727.20 /ea | 727 |
| Recirculation pump/bronze - TW | 1.00 ea | 727.20 /ea | 727 |
| Expansion tank/ASME/potable | 6.00 ea | 1,774.20 /ea | 10,645 |
| Expansion tank/ASME/potable - lab | 1.00 ea | 1,774.20 /ea | 1,774 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| 221000 Plumbing Facility Water Distribution | | | |
| Thermostatic mixing valve/TMV | 5.00 ea | 1,180.28 /ea | 5,901 |
| Thermostatic mixing valve/TMV - lab | 1.00 ea | 1,180.28 /ea | 1,180 |
| Thermostatic mixing valve/TMV - emergency | 1.00 ea | 1,180.28 /ea | 1,180 |
| Hose bibbs w/vac. breaker - interior | 35.00 ea | 209.08 /ea | 7,318 |
| Hose bibbs w/vac. breaker - interior - toilet facility | 2.00 ea | 209.08 /ea | 418 |
| Hose bibbs w/vac. breaker - exterior | 18.00 ea | 474.10 /ea | 8,534 |
| Shock absorbers & trap primers | 408,500.00 sf | 0.10 /sf | 40,850 |
| Valve box/dishwasher | 15.00 ea | 231.05 /ea | 3,466 |
| Valve box/washing machine | 4.00 ea | 231.05 /ea | 924 |
| Valve box/ice machine | 5.00 ea | 181.05 /ea | 905 |
| Domestic water entrance UG/ductile iron | 55.00 lf | 324.20 /lf | 17,831 |
| Domestic water entrance UG/ductile iron - toilet facility | 30.00 lf | 324.20 /lf | 9,726 |
| Domestic water AG/type "L" copper/solder | 19,325.00 lf | 25.69 /lf | 496,374 |
| Domestic water AG/type "L" copper/solder - toilet facility | 385.00 lf | 25.69 /lf | 9,889 |
| Non-potable water AG/type "L" copper/solder | 3,730.00 lf | 22.26 /lf | 83,013 |
| Non-potable water AG/type "L" copper/solder - irrigation | 275.00 lf | 22.26 /lf | 6,120 |
| Tempered water piping AG/type "L" copper/solder | 1,350.00 lf | 22.26 /lf | 30,045 |
| - Domestic water piping accessories | 24,735.00 lf | 2.59 /lf | 64,087 |
| - Domestic water piping accessories - toilet facility | 415.00 lf | 2.59 /lf | 1,075 |
| - Domestic water clean & test piping system | 3.00 ea | 1,046.80 /ea | 3,140 |
| 221000 Plumbing Facility Water Distribution | 408,500.00 gsf | 2.03 /gsf | 829,813 |
| 221300 Plumbing - Sanitary, Waste & Vent Piping | | | |
| Floor drain | 55.00 ea | 362.10 /ea | 19,916 |
| Floor drain - toilet facility | 4.00 ea | 362.10 /ea | 1,448 |
| Floor sink | 6.00 ea | 2,571.18 /ea | 15,427 |
| Lint interceptor | 3.00 ea | 724.20 /ea | 2,173 |
| Grease interceptor/interior | 2.00 ea | 4,363.80 /ea | 8,728 |
| <i>Elevator sump pump/oil minder</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| Sanitary UG/cast iron single hub pipe & ftgs. | 4,325.00 lf | 58.07 /lf | 251,165 |
| Sanitary UG/cast iron single hub pipe & ftgs. - toilet facility | 150.00 lf | 58.07 /lf | 8,711 |
| Sanitary AG/cast iron no hub pipe & ftgs. | 10,635.00 lf | 49.37 /lf | 525,052 |
| Sanitary AG/cast iron no hub pipe & ftgs. - toilet facility | 300.00 lf | 49.37 /lf | 14,811 |
| Grease waste UG/CI single hub pipe & ftgs. | 675.00 lf | 58.07 /lf | 39,199 |
| Grease waste & vent AG/cast iron no hub pipe & ftgs. | 500.00 lf | 49.37 /lf | 24,685 |
| - Sanitary waste & vent piping accessories | 16,135.00 lf | 1.84 /lf | 29,704 |
| - Sanitary waste & vent piping accessories - toilet facility | 450.00 lf | 1.84 /lf | 828 |
| - Sanitary waste & vent clean & test piping system | 2.00 ea | 996.80 /ea | 1,994 |
| 221300 Plumbing - Sanitary, Waste & Vent Piping | 408,500.00 gsf | 2.31 /gsf | 943,840 |
| 221400 Plumbing - Rainleader Piping | | | |
| Roof drain | 23.00 ea | 366.10 /ea | 8,420 |
| Roof drain - 4" | 67.00 ea | 298.07 /ea | 19,971 |
| Roof drain - 6" | 4.00 ea | 387.84 /ea | 1,551 |
| Area drain | 7.00 ea | 408.84 /ea | 2,862 |
| Rainleader UG/cast iron single hub pipe & ftgs. | 2,200.00 lf | 147.25 /lf | 323,947 |
| Rainleader AG/cast iron no hub pipe & ftgs. | 6,950.00 lf | 111.14 /lf | 772,417 |
| - Rainleader piping accessories | 9,150.00 lf | 1.84 /lf | 16,845 |
| - Rainleader clean & test piping system | 1.00 ea | 498.40 /ea | 498 |
| 221400 Plumbing - Rainleader Piping | 408,500.00 gsf | 2.81 /gsf | 1,146,512 |
| 221500 General Service Compressed Air Systems | | | |
| Duplex air compressor | 1.00 ea | 22,948.40 /ea | 22,948 |
| - Refrigerated dryer | 1.00 ea | 4,574.20 /ea | 4,574 |
| - Line filter | 1.00 ea | 606.05 /ea | 606 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|----------------|
| 221500 General Service Compressed Air Systems | | | |
| Compressed air piping/type "L" copper | 410.00 lf | 34.39 /lf | 14,100 |
| - Compressed air piping accessories | 410.00 lf | 2.09 /lf | 857 |
| - Compressed air clean & test piping system | 1.00 ea | 772.60 /ea | 773 |
| 221500 General Service Compressed Air Systems | 408,500.00 gsf | 0.11 /gsf | 43,858 |
| 222000 Plumbing - Gas Piping | | | |
| Emergency gas shut off/cabinet w/1" solenoid & UL ball valve | 6.00 ea | 4,022.60 /ea | 24,136 |
| Gas turret/double | 147.00 ea | 325.05 /ea | 47,782 |
| Gas piping UG/Trac st. stl. flex piping | 30.00 lf | 63.46 /lf | 1,904 |
| Gas piping/sch 40 black steel CW t&c | 1,925.00 lf | 34.02 /lf | 65,478 |
| - Gas piping accessories | 1,975.00 lf | 2.59 /lf | 5,117 |
| - Gas piping clean & test piping system | 1.00 ea | 1,595.20 /ea | 1,595 |
| 222000 Plumbing - Gas Piping | 408,500.00 gsf | 0.36 /gsf | 146,012 |
| 223000 Plumbing - Equipment | | | |
| Water heaters/electric | 5.00 ea | 1,892.35 /ea | 9,462 |
| Water heaters/electric - 250 gal | 4.00 ea | 33,121.00 /ea | 132,484 |
| Water heaters/electric - toilet facility | 1.00 ea | 1,892.35 /ea | 1,892 |
| Water heaters/electric/point of service | 26.00 ea | 597.25 /ea | 15,529 |
| HWH/indirect fed storage tank | 3.00 ea | 4,625.35 /ea | 13,876 |
| Heat exchanger/plate & frame/water to water | 3.00 ea | 18,863.49 /ea | 56,590 |
| 223000 Plumbing - Equipment | 408,500.00 gsf | 0.56 /gsf | 229,833 |
| 224000 Plumbing Fixtures | | | |
| Water closet/wall mnt./carrier/sensor flush valve - P-1 | 48.00 ea | 1,614.60 /ea | 77,501 |
| Water closet/wall mnt./carrier/sensor flush valve - toilet facility | 4.00 ea | 1,614.60 /ea | 6,458 |
| Water closet/wall mnt./carrier/sensor flush valve/ADA - P-1A & B | 78.00 ea | 1,648.60 /ea | 128,591 |
| Water closet/wall mnt./carrier/sensor flush valve/ADA - toilet facility | 3.00 ea | 1,648.60 /ea | 4,946 |
| Urinal/wall mnt./carrier/sensor flush valve - P-2 | 10.00 ea | 1,293.53 /ea | 12,935 |
| Urinal/wall mnt./carrier/sensor flush valve - toilet facility | 2.00 ea | 1,293.53 /ea | 2,587 |
| Urinal/wall mnt./carrier/sensor flush valve/ADA - P-2A | 10.00 ea | 1,286.12 /ea | 12,861 |
| Lavatory/undermount/sensor faucet/ADA - P-3 | 64.00 ea | 843.98 /ea | 54,015 |
| Lavatory/undermount/sensor faucet/ADA - toilet facility | 5.00 ea | 843.98 /ea | 4,220 |
| Lavatory/wall hung/solar faucet/carrier/ADA - P-3A | 68.00 ea | 1,602.45 /ea | 108,967 |
| Faucet/gooseneck/integral lavatory/ADA - PX-4 & 5 (INSTALL ONLY) | 69.00 ea | 168.15 /ea | 11,602 |
| Sink/lay-in/1-bowl/std faucet - PX-1 (INSTALL ONLY) | 57.00 ea | 334.98 /ea | 19,094 |
| Sink/lay-in/1-bowl/std faucet/art rooms - PX-3 (INSTALL ONLY) | 4.00 ea | 334.98 /ea | 1,340 |
| Sink/lay-in/1-bowl/std faucet - PX-2 (INSTALL ONLY) | 9.00 ea | 334.98 /ea | 3,015 |
| Trough type wash sink/3-faucet - art rooms - P-7 | 8.00 ea | 3,948.40 /ea | 31,587 |
| - Solids interceptors (art & service sinks) | 13.00 ea | 539.20 /ea | 7,010 |
| Mop sink - P-4 | 17.00 ea | 1,199.40 /ea | 20,390 |
| Mop sink - toilet facility | 1.00 ea | 1,199.40 /ea | 1,199 |
| Service sink/wall mount/std faucet - P-4A | 1.00 ea | 1,017.75 /ea | 1,018 |
| Shower stall/std valve & access./3'x3' fiberglass - P-6 | 6.00 ea | 1,078.66 /ea | 6,472 |
| Shower stall/std valve & access./3'x3' fiberglass/ADA - P-6A | 7.00 ea | 1,527.85 /ea | 10,695 |
| Emergency shower/eye wash sta./no mixing valve/wall mount - P-8 & 8A | 15.00 ea | 1,935.50 /ea | 29,033 |
| Water cooler/bottle filler only - P-5B | 15.00 ea | 1,812.28 /ea | 27,184 |
| Water cooler/bottle filler/single - P-5A | 14.00 ea | 2,107.40 /ea | 29,504 |
| Water cooler/bottle filler/single - toilet facility | 2.00 ea | 2,107.40 /ea | 4,215 |
| Water cooler/bottle filler/bi-level/ADA - P-5 | 7.00 ea | 4,494.60 /ea | 31,462 |
| - Plumbing fixtures offload & distribution (major fixtures) | 358.00 ea | 112.10 /ea | 40,132 |
| - Plumbing fixtures offload & distribution - toilet facility | 14.00 ea | 112.10 /ea | 1,569 |
| - Plumbing fixtures rough-in | 358.00 ea | 137.10 /ea | 49,082 |
| - Plumbing fixtures rough-in - toilet facility | 14.00 ea | 137.10 /ea | 1,919 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|------------------|
| 224000 Plumbing Fixtures | 408,500.00 gsf | 1.81 /gsf | 740,601 |
| 226600 Plumbing Acid Neutrization System | | | |
| Acid neut. system w/monitor/100 gal. tank | 1.00 ea | 42,569.40 /ea | 42,569 |
| Floor drain | 23.00 ea | 350.10 /ea | 8,052 |
| Acid waste UG/sch 40 polypropylene fuseal | 100.00 lf | 59.29 /lf | 5,929 |
| Acid waste AG/sch 40 polypropylene fuseal | 2,575.00 lf | 63.16 /lf | 162,631 |
| - Acid waste & vent piping accessories | 2,675.00 lf | 2.09 /lf | 5,593 |
| - Acid waste & vent clean & test piping system | 1.00 ea | 722.60 /ea | 723 |
| 226600 Plumbing Acid Neutrization System | 408,500.00 gsf | 0.55 /gsf | 225,498 |
| D20 Plumbing | 408,500.00 gsf | 12.94 /gsf | 5,285,962 |
| D2090 Plumbing EBP #2 | | | |
| 220090 Plumbing EBP #2 | | | |
| PJ Kennedy | 1.00 ls | 118,900.00 /ls | 118,900 |
| 220090 Plumbing EBP #2 | | | 118,900 |
| D2090 Plumbing EBP #2 | 408,500.00 gsf | 0.29 /gsf | 118,900 |
| D20 Plumbing | 408,500.00 gsf | 13.23 /gsf | 5,404,862 |
| D30 Heating, Ventilating, and Air Conditioning (HVAC) | | | |
| D30 HVAC | | | |
| 230005 HVAC - Misc | | | |
| Laborer for trade support - HVAC | 45.00 wks | 4,334.00 /wks | 195,030 |
| Laborer for trade support - HVAC | (45.00) wks | 4,334.00 /wks | (195,030) |
| Shop drawings/ BIM/ ENG Support/ As-Builts | 408,500.00 sf | 1.25 /sf | 510,625 |
| General requirements (management, permits, as-builts, coring, fire stopping) | 800.00 sf | 1.50 /sf | 1,200 |
| System testing and flushing | 1.00 ls | 75,000.00 /ls | 75,000 |
| Manlift - per month | 16.00 mo | 1,889.88 /mo | 30,238 |
| Commissioning support/lump sum | 408,500.00 gsf | 0.25 /gsf | 100,000 |
| Coring, sleeves & firestopping | 408,500.00 gsf | 0.10 /gsf | 40,850 |
| Vibration & seismic restraints | 408,500.00 gsf | 0.25 /gsf | 102,125 |
| 230005 HVAC - Misc | 408,500.00 gsf | 2.11 /gsf | 860,038 |
| 230006 HVAC - Phasing | | | |
| Backfeeding and maintaining systems for phasing | 1.00 ls | 120,000.00 /ls | 120,000 |
| 230006 HVAC - Phasing | 408,500.00 gsf | 0.29 /gsf | 120,000 |
| 230007 HVAC Demo | | | |
| Demolition/cut, drop (partial) & make safe (sq. ft.) | 408,500.00 gsf | 0.36 /gsf | 145,100 |
| 230007 HVAC Demo | 408,500.00 gsf | 0.36 /gsf | 145,100 |
| 230593 Testing, Adjusting and Balancing for HVAC | | | |
| Testing & balancing - Fusco Area swing space reno | 8,000.00 sf | 2.50 /sf | 20,000 |
| Testing & balancing - First Floor Upper swing space reno | 9,000.00 sf | 4.50 /sf | 40,500 |
| Testing & balancing/cost per sq. ft. | 408,500.00 sf | 1.10 /sf | 449,350 |
| Testing & balancing/day | 1.00 day | 1,667.68 /day | 1,668 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| 230593 Testing, Adjusting and Balancing for HVAC | 408,500.00 gsf | 1.25 /gsf | 511,518 |
| 230700 HVAC Insulation | | | |
| Insulation/ductwork/blanket wrap | 235,695.00 sf | 3.81 /sf | 897,938 |
| Insulation/equipment/weatherproof exposed | 2,250.00 sf | 12.69 /sf | 28,555 |
| Insulation/ductwork/firewrap (two layer) | 2,000.00 sf | 27.18 /sf | 54,368 |
| Insulation/pipe/copper (avg. size) | 10,380.00 lf | 9.61 /lf | 99,760 |
| Insulation/pipe/copper (refrigerant) | 21,900.00 lf | 9.61 /lf | 210,477 |
| Insulation/pipe/copper (condensate - VRF) | 5,200.00 lf | 9.61 /lf | 49,976 |
| Insulation/pipe/copper (condensate - FCU) | 5,320.00 lf | 9.61 /lf | 51,130 |
| Insulation/pipe/copper (1/2"-1") | 22,875.00 lf | 8.37 /lf | 191,436 |
| Insulation/pipe/copper (1-1/4"-2") | 10,335.00 lf | 10.98 /lf | 113,427 |
| Insulation/pipe/weld (avg. size) | 960.00 lf | 29.19 /lf | 28,022 |
| Insulation/pipe/weld (2-1/2"-4") | 4,100.00 lf | 16.13 /lf | 66,128 |
| Insulation/pipe/weld (5"-8") | 4,090.00 lf | 26.04 /lf | 106,516 |
| Insulation/pipe/copper/weatherproof exposed (roof refrigerant) | 3,800.00 lf | 14.50 /lf | 55,100 |
| Insulation/pipe/weld/weatherproof exposed (5"-8") | 3,370.00 lf | 37.11 /lf | 125,050 |
| 230700 HVAC Insulation | 408,500.00 gsf | 5.09 /gsf | 2,077,884 |
| 230900 Direct Digital Control System for HVAC | | | |
| Automatic temperature controls/cost per sq. ft. - toilet bldg | 800.00 sf | 4.50 /sf | 3,600 |
| Automatic temperature controls/cost per sq. ft. (proprietary) | 408,500.00 sf | 6.37 /sf | 2,603,125 |
| <i>ATC - AirCuity (system hardware, start-up/commissioning, training, and support (Flow Tech quote)</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| <i>ATC - AirCuity (installation)</i> | <i>0.00 loc</i> | <i>/loc</i> | |
| ATC - VRF outdoor units (wiring only) - each | 21.00 ea | 947.64 /ea | 19,900 |
| ATC - VRF indoor units (wiring only) - each | 150.00 ea | 626.40 /ea | 93,960 |
| ATC - VRF refrigerant leak detection (1 per indoor unit) BACnet (classrooms only) | 52.00 ea | 1,179.07 /ea | 61,312 |
| 230900 Direct Digital Control System for HVAC | 408,500.00 gsf | 6.81 /gsf | 2,781,897 |
| 232113 Hydronic Piping, incl Chilled Beams | | | |
| Hot water s&r/type "L" copper solder - avg. size (misc.) | 4,200.00 lf | 25.89 /lf | 108,717 |
| Hot water s&r/type "L" copper solder - avg. size (VAV's) | 1,980.00 lf | 25.89 /lf | 51,252 |
| Hot water s&r/type "L" copper solder - 3/4" | 9,040.00 lf | 18.65 /lf | 168,596 |
| Hot water s&r/type "L" copper solder - 1" | 3,600.00 lf | 23.19 /lf | 83,484 |
| Hot water s&r/type "L" copper solder - 1-1/4" | 1,355.00 lf | 26.69 /lf | 36,165 |
| Hot water s&r/type "L" copper solder - 1-1/2" | 1,220.00 lf | 31.52 /lf | 38,450 |
| Hot water s&r/type "L" copper solder - 2" | 2,060.00 lf | 41.71 /lf | 85,918 |
| Hot water s&r/sch 40 blk stl ERW weld - avg. size | 480.00 lf | 94.20 /lf | 45,214 |
| Hot water s&r/sch 40 blk stl ERW weld - 2-1/2" | 620.00 lf | 49.09 /lf | 30,436 |
| Hot water s&r/sch 40 blk stl ERW weld - 2-1/2" (To RTU's) | 500.00 lf | 49.09 /lf | 24,545 |
| Hot water s&r/sch 40 blk stl ERW weld - 4" | 740.00 lf | 81.09 /lf | 60,007 |
| Hot water s&r/sch 40 blk stl ERW weld - 5" | 900.00 lf | 97.34 /lf | 87,603 |
| Hot water s&r/sch 40 blk stl ERW weld - 6" | 1,285.00 lf | 125.69 /lf | 161,512 |
| Hot water s&r/sch 40 blk stl ERW weld - 6" (roof mounted) | 1,685.00 lf | 125.69 /lf | 211,788 |
| Chilled water s&r/type "L" copper solder - avg. size (misc.) | 4,200.00 lf | 25.89 /lf | 108,717 |
| Chilled water s&r/type "L" copper solder - 3/4" | 7,845.00 lf | 18.65 /lf | 146,309 |
| Chilled water s&r/type "L" copper solder - 1" | 2,390.00 lf | 23.19 /lf | 55,424 |
| Chilled water s&r/type "L" copper solder - 1-1/4" | 2,750.00 lf | 26.69 /lf | 73,397 |
| Chilled water s&r/type "L" copper solder - 1-1/2" | 880.00 lf | 31.52 /lf | 27,735 |
| Chilled water s&r/type "L" copper solder - 2" | 2,070.00 lf | 41.71 /lf | 86,335 |
| Chilled water s&r/sch 40 blk stl ERW weld - avg. size | 480.00 lf | 94.20 /lf | 45,214 |
| Chilled water s&r/sch 40 blk stl ERW weld - 2-1/2" | 925.00 lf | 49.09 /lf | 45,408 |
| Chilled water s&r/sch 40 blk stl ERW weld - 4" | 1,315.00 lf | 81.09 /lf | 106,633 |
| Chilled water s&r/sch 40 blk stl ERW weld - 5" | 625.00 lf | 97.34 /lf | 60,836 |
| Chilled water s&r/sch 40 blk stl ERW weld - 6" | 1,280.00 lf | 125.69 /lf | 160,883 |

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| 232113 Hydronic Piping, incl Chilled Beams | | | |
| Chilled water s&r/sch 40 blk stl ERW weld - 6" (roof mounted) | 1,685.00 lf | 125.69 /lf | 211,788 |
| - Hydronic piping accessories | 56,110.00 lf | 2.60 /lf | 145,610 |
| - Hydronic pipe - Roof support stand - 3'L x 2'H (#ES200) | 110.00 ea | 317.29 /ea | 34,902 |
| - Suction diffusers - 6"x5" (B&G #GF-3X) | 16.00 ea | 1,101.94 /ea | 17,631 |
| HWP Pump/in-line/20 hp | 6.00 ea | 6,373.30 /ea | 38,240 |
| CHWP Pump/in-line/20 hp | 10.00 ea | 6,373.30 /ea | 63,733 |
| - Flex connector/HVAC pumps - 5" | 32.00 ea | 351.29 /ea | 11,241 |
| - Triple duty valves | 16.00 ea | 1,672.14 /ea | 26,754 |
| Air separators | 5.00 ea | 1,990.16 /ea | 9,951 |
| Expansion tanks/ASME | 10.00 ea | 5,878.36 /ea | 58,784 |
| Flow meter/ultrasonic | 6.00 ea | 2,725.30 /ea | 16,352 |
| Coil Pak | 414.00 ea | 504.25 /ea | 208,759 |
| Temp boiler pumps, air separator, expansion tank, etc. | 1.00 ls | 17,000.00 /ls | 17,000 |
| Steam piping/sch 40 blk stl/SMLS/t&c - 1-1/2" | 125.00 lf | 60.08 /lf | 7,510 |
| Steam piping/sch 40 blk stl/ERW/weld - 10" | 125.00 lf | 242.41 /lf | 30,301 |
| A/C cond. pump (VRF) | 130.00 ea | 232.16 /ea | 30,181 |
| A/C cond. pump (FCU) | 133.00 ea | 232.16 /ea | 30,878 |
| A/C cond. drains/type "L" copper (VRF system) | 5,200.00 lf | 21.68 /lf | 112,740 |
| <i>A/C cond. drains/type "L" copper (4-pipe FCU's)</i> | <i>0.00 lf</i> | <i>/lf</i> | |
| - A/C condensate piping accessories | 10,520.00 lf | 2.35 /lf | 24,670 |
| 232113 Hydronic Piping, incl Chilled Beams | 408,500.00 gsf | 7.85 /gsf | 3,207,603 |
| 232300 Refrigerant Piping | | | |
| Refrigerant piping/type "ACR" hard copper/brazed (HRU's to remote condensing units 200lf/unit) | 3,800.00 lf | 67.29 /lf | 255,710 |
| - Refrigeration piping accessories | 3,800.00 lf | 2.28 /lf | 8,671 |
| - Refrigeration clean & test piping system (nitrogen purge) | 3,800.00 lf | 1.03 /lf | 3,921 |
| - Refrigerant charge/R410B | 650.00 lbs | 37.02 /lbs | 24,062 |
| - Refrigeration piping - Roof support stand - 2'L x 2'H (#ES200) | 300.00 ea | 263.23 /ea | 78,969 |
| 232300 Refrigerant Piping | 408,500.00 gsf | 0.91 /gsf | 371,334 |
| 232500 HVAC Water Treatment | | | |
| Chemical treatment (lump sum) | 2.00 ls | 15,000.00 /ls | 30,000 |
| Glycol feed/50 gal. tank w/pump (Neptune #G-50-1) (HW) | 2.00 ea | 5,306.60 /ea | 10,613 |
| Glycol feed/50 gal. tank w/pump (Neptune #G-50-1) (CHW) | 2.00 ea | 5,306.60 /ea | 10,613 |
| - Glycol solution/40% propylene (HW) | 7,500.00 gal | 25.63 /gal | 192,244 |
| 232500 HVAC Water Treatment | 408,500.00 gsf | 0.60 /gsf | 243,470 |
| 233000 HVAC Sheetmetal | | | |
| Sheetmetal & accessories/galvanized Recon Adjustment | 1.00 ls | 7,391.95 /ls | 7,392 |
| Sheetmetal & accessories/galvanized (take-off) | 392,000.00 lb | 12.74 /lb | 4,994,503 |
| Sheetmetal & accessories/galvanized (duct distribution: Part A 1st .35 lbs/SF) | 4,625.00 lb | 12.74 /lb | 58,927 |
| Sheetmetal & accessories/galvanized (duct distribution: Part B 1st .35 lbs/SF) | 4,749.00 lb | 12.74 /lb | 60,507 |
| Sheetmetal & accessories/galvanized (duct distribution: Chorus/Band/Performing arts/support .85lbs/sf) | 5,000.00 lb | 12.74 /lb | 63,705 |
| Sheetmetal & accessories/galvanized (complete auditorium .35lbs/sf) | 4,500.00 lb | 12.74 /lb | 57,335 |
| Sheetmetal & accessories/galvanized (laser cutter exhaust) | 2,400.00 lb | 12.74 /lb | 30,579 |
| Sheetmetal & accessories/galvanized | 300.00 lb | 12.74 /lb | 3,822 |
| <i>Sheetmetal & accessories/welded stainless steel (fume hoods - recirculating)</i> | <i>0.00 lb</i> | <i>/lb</i> | |
| Sheetmetal & accessories/welded stainless steel (chem storage exhaust) | 2,500.00 lb | 36.52 /lb | 91,309 |
| Sheetmetal & accessories/welded stainless steel (paint booth) | 2,500.00 lb | 36.52 /lb | 91,309 |
| Sheetmetal & accessories/welded stainless steel (dishwasher) | 1,400.00 lb | 36.52 /lb | 51,133 |
| Sheetmetal & accessories/welded black iron (kitchen exhaust) | 5,000.00 lb | 21.65 /lb | 108,253 |
| Sheetmetal & accessories/welded black iron (kiln) | 500.00 lb | 21.65 /lb | 10,825 |



90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|------------------|
| 233000 HVAC Sheetmetal | | | |
| SM - Add for internal ductwork liner | 43,000.00 sf | 7.88 /sf | 338,991 |
| SM - Diffusers, registers & grilles | 728.00 ea | 233.86 /ea | 170,246 |
| SM - Diffusers, registers & grilles | 7.00 ea | 223.85 /ea | 1,567 |
| SM - Linear slot diffusers | 721.00 ea | 389.76 /ea | 281,015 |
| SM - Trion Air Filter - 24"x24" AF1 and AF2 | 2.00 ea | 2,241.30 /ea | 4,483 |
| SM - Grease duct Access Doors | 14.00 ea | 970.68 /ea | 13,590 |
| SM - Combination fire/smoke dampers/louver type/UL | 55.00 ea | 969.20 /ea | 53,306 |
| SM - Smoke Dampers - in RTUs | 0.00 ea | /ea | |
| SM - Remote Control Balancing Dampers | 52.00 ea | 576.52 /ea | 29,979 |
| SM - Motorized damper | 32.00 ea | 1,001.30 /ea | 32,042 |
| SM - Smoke detectors/duct mount | 21.00 ea | 767.67 /ea | 16,121 |
| SM - Sound attenuators/elbow/hvy. gauge | 380,500.00 cfm | 0.64 /cfm | 243,571 |
| SM - Kitchen exhaust hood/st. steel/install only (by KES) | 2.00 ea | 1,882.72 /ea | 3,765 |
| SM - Dishwasher exhaust hood/st. steel/install only (by KES) | 1.00 ea | 1,176.70 /ea | 1,177 |
| Louvers - misc. - with arch | 0.00 sf | /sf | |
| 233000 HVAC Sheetmetal | 408,500.00 gsf | 16.69 /gsf | 6,819,450 |
| 233400 HVAC Fans | | | |
| Exhaust fan/roof - mech room | 4.00 ea | 6,412.04 /ea | 25,648 |
| Exhaust fan/roof - Art storage | 1.00 ea | 6,412.04 /ea | 6,412 |
| Exhaust fan/roof - Kitchen hood exhaust 6000 CFM | 1.00 ea | 8,912.04 /ea | 8,912 |
| Exhaust fan/roof - Dishwasher Ex | 1.00 ea | 4,912.04 /ea | 4,912 |
| Exhaust fan/roof - kiln exhaust | 1.00 ea | 4,441.36 /ea | 4,441 |
| Exhaust fan/roof - Chem storage | 1.00 ea | 6,412.04 /ea | 6,412 |
| Exhaust fan/roof - Wood Shop | 1.00 ea | 6,412.04 /ea | 6,412 |
| EF/centrifugal upblast/roof - 200 cfm (Greenheck #CUE) US Vent per MEMO | 18.00 ea | 161.97 /ea | 2,916 |
| Combustion air fan/roof/w VFD - cfm (Tjernlund) | 400.00 cfm | 5.49 /cfm | 2,195 |
| EF/centrifugal inline/box - 300 cfm (Greenheck #SQ90-VG) Maker | 3.00 ea | 1,147.94 /ea | 3,444 |
| EF/centrifugal inline/box - 600 cfm | 2.00 ea | 1,586.61 /ea | 3,173 |
| EF/centrifugal inline/box - 500 cfm (Greenheck #SQ95VG) Fire Pump | 1.00 ea | 1,513.89 /ea | 1,514 |
| EF/centrifugal inline/box - 2,506 cfm (Greenheck #SQ150-VG) Mechanical | 1.00 ea | 2,209.86 /ea | 2,210 |
| Booster fan/inline - 25 cfm (Fantech #FG4XL) FACS Per MEMO | 3.00 ea | 438.47 /ea | 1,315 |
| Destratification fans/ceiling propeller 16" | 4.00 ea | 6,382.72 /ea | 25,531 |
| Dust collector/ 4,400 cfm | 1.00 ea | 48,624.08 /ea | 48,624 |
| 233400 HVAC Fans | 408,500.00 gsf | 0.38 /gsf | 154,071 |
| 233600 Air Terminal Units | | | |
| VAV's misc. | 408,500.00 sf | 0.05 /sf | 20,425 |
| VAV/Ex Ret Box | 173.00 ea | 597.88 /ea | 103,433 |
| VAV/box w controls/ - 4-5" | 52.00 ea | 742.88 /ea | 38,630 |
| VAV/box w controls/ - 6-7" | 42.00 ea | 756.88 /ea | 31,789 |
| VAV/box w controls/ - 8-9" | 24.00 ea | 869.35 /ea | 20,864 |
| VAV/box w controls/ - 10" | 4.00 ea | 923.35 /ea | 3,693 |
| VAV/box w controls/ - 10" Per Memo | 26.00 ea | 923.35 /ea | 24,007 |
| VAV/box w controls/ - 12" | 5.00 ea | 1,031.82 /ea | 5,159 |
| VAV/box w 2-row coil & controls/ - 6" | 22.00 ea | 760.41 /ea | 16,729 |
| VAV/box w 2-row coil & controls/ - 10" | 26.00 ea | 933.88 /ea | 24,281 |
| VAV/box w electric coil & controls/ - 10" | 6.00 ea | 1,834.82 /ea | 11,009 |
| VAV/box w electric coil & controls/ - 16" | 5.00 ea | 2,184.82 /ea | 10,924 |
| 233600 Air Terminal Units | 408,500.00 gsf | 0.76 /gsf | 310,944 |
| 235000 HVAC Boilers & Heat Exchangers | | | |
| Boiler/HW/electric 490mbh | 2.00 ea | 62,084.60 /ea | 124,169 |
| Boilers/steam/gas/high eff. cond. - 250 hp 1,000 gal tank | 18.00 mo | 15,700.00 /mo | 282,600 |
| Boiler circulator pump | 4.00 ea | 806.35 /ea | 3,225 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|------------------|
| 235000 HVAC Boilers & Heat Exchangers | | | |
| Fuel for start-up | 1.00 ls | 2,500.00 /ls | 2,500 |
| Weekly maintenance | 72.00 wks | 800.00 /wks | 57,600 |
| 24/7 on call maintenance | 1.00 ls | 30,000.00 /ls | 30,000 |
| Heat exchanger/plate & frame/water to water - 400 gpm (B&G #P47) | 2.00 ea | 15,729.61 /ea | 31,459 |
| Buffer tanks/Lochinvar - 700 gals. | 4.00 ea | 10,087.49 /ea | 40,350 |
| 235000 HVAC Boilers & Heat Exchangers | 408,500.00 gsf | 1.40 /gsf | 571,904 |
| 237000 HVAC - Central Air Handling Equipment | | | |
| ERU-1 | 9,000.00 cfm | 22.83 /cfm | 205,500 |
| ERU-2 | 4,000.00 cfm | 17.50 /cfm | 70,000 |
| ERU-3 | 1,100.00 cfm | 25.00 /cfm | 27,500 |
| ERU-4 | 8,000.00 cfm | 17.50 /cfm | 140,000 |
| HRU-1 Vestibule | 18,000.00 cfm | 20.17 /cfm | 363,000 |
| HRU-2 Vestibule | 18,000.00 cfm | 20.17 /cfm | 363,000 |
| HRU-3 | 3,850.00 cfm | 24.00 /cfm | 92,400 |
| HRU-4 Vestibule | 18,000.00 cfm | 20.17 /cfm | 363,000 |
| HRU-5 Vestibule | 18,000.00 cfm | 20.17 /cfm | 363,000 |
| HRU-6 | 11,650.00 cfm | 16.00 /cfm | 186,400 |
| HRU-7 | 4,410.00 cfm | 24.00 /cfm | 105,840 |
| HRU-8 | 5,690.00 cfm | 24.00 /cfm | 136,560 |
| HRU-9 | 5,250.00 cfm | 24.00 /cfm | 126,000 |
| HRU-10 | 6,250.00 cfm | 24.00 /cfm | 150,000 |
| HRU-11 | 13,550.00 cfm | 16.00 /cfm | 216,800 |
| HRU-12 w/catwalk | 10,950.00 cfm | 21.48 /cfm | 235,200 |
| HRU-13 w/catwalk | 10,950.00 cfm | 21.48 /cfm | 235,200 |
| HRU-14 w/catwalk | 12,000.00 cfm | 21.00 /cfm | 252,000 |
| HRU-15 | 6,100.00 cfm | 24.00 /cfm | 146,400 |
| HV-1 Kitchen | 5,500.00 cfm | 6.50 /cfm | 35,750 |
| Vendor Adjustment | 1.00 ls | 191,005.00 /ls | 191,005 |
| - Roof curb/vibration isolation (1 - 5,000 cfm) | 6.00 ea | 5,833.33 /ea | 35,000 |
| - Roof curb/vibration isolation (6 - 20,000 cfm) | 11.00 ea | 8,000.00 /ea | 88,000 |
| ERV/indoor horiz. - 200 cfm (Lifebreath #300DCS) | 1.00 ea | 5,091.15 /ea | 5,091 |
| 237000 HVAC - Central Air Handling Equipment | 408,500.00 gsf | 10.12 /gsf | 4,132,646 |
| 238000 Evaporative HVAC Equipment | | | |
| Heat recovery condensing unit (72 mbh) | 7.00 ea | 16,801.70 /ea | 117,612 |
| Heat recovery condensing unit (96 mbh) | 6.00 ea | 19,594.70 /ea | 117,568 |
| Heat recovery condensing unit (120 mbh) | 33.00 ea | 22,316.64 /ea | 736,449 |
| Heat recovery condensing unit (144 mbh) | 1.00 ea | 27,769.64 /ea | 27,770 |
| Air cooled heat pump ACHP-1 (335 tons) | 1.00 ea | 738,898.80 /ea | 738,899 |
| Air cooled heat pump ACHP-2 (168 tons) | 1.00 ea | 373,119.04 /ea | 373,119 |
| Air cooled heat pump ACHP-3 (168 tons) | 1.00 ea | 373,119.04 /ea | 373,119 |
| Air cooled chiller ACH-1 (176 tons) | 1.00 ea | 251,949.40 /ea | 251,949 |
| Air cooled chiller ACH-2 (176 tons) | 1.00 ea | 251,949.40 /ea | 251,949 |
| Window AC unit - | 2.00 ea | 1,381.03 /ea | 2,762 |
| 238000 Evaporative HVAC Equipment | 408,500.00 gsf | 7.32 /gsf | 2,991,197 |
| 238025 Mini-Split VRF Heat Pump Systems | | | |
| Mini-split HP system/1-zone/wall mnt./heat or cool - 12 mbh | 2.00 ea | 2,338.93 /ea | 4,678 |
| Mini-split refrigeration line set/6-12 mbh - 50' | 2.00 ea | 584.88 /ea | 1,170 |
| Mini-split clean & test piping system (nitrogen purge) | 100.00 lf | 0.98 /lf | 98 |
| Mini-split refrigerant charge/R410B | 30.00 lbs | 29.87 /lbs | 896 |
| Mini-split condensate drains/type"L" copper | 50.00 lf | 19.43 /lf | 972 |
| ATC - Mini-split condensing units (w/factory controls) | 2.00 ea | 879.76 /ea | 1,760 |
| VRF/Indoor units/wall mnt. - | 2.00 ea | 1,670.88 /ea | 3,342 |
| VRF/Indoor units/4-way clg. csstt (small) | 68.00 ea | 2,039.00 /ea | 138,652 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| 238025 Mini-Split VRF Heat Pump Systems | | | |
| VRF/Indoor units/4-way clg. csstt (medium) | 42.00 ea | 2,586.70 /ea | 108,641 |
| VRF/Indoor units/ducted horiz. - small | 6.00 ea | 2,065.60 /ea | 12,394 |
| VRF/Indoor units/ducted horiz. - medium | 15.00 ea | 2,455.18 /ea | 36,828 |
| VRF/Indoor units/ducted horiz. - medium (Part E) | 11.00 ea | 2,455.18 /ea | 27,007 |
| VRF/Indoor units/ducted horiz. - medium (Part E) Per Memo | 5.00 ea | 2,455.18 /ea | 12,276 |
| VRF/Indoor units/ducted horiz. - medium (part B) Per Memo | 5.00 ea | 2,455.18 /ea | 12,276 |
| VRF/Indoor units/ducted horiz. - large | 5.00 ea | 2,988.62 /ea | 14,943 |
| <i>VRF/Outdoor cond. unit/heat or cool - 140 mbh</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| <i>VRF/Outdoor cond. unit/heat or cool - 140 mbh (Part E)</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| VRF/Outdoor cond. unit/heat & cool - 72 mbh | 1.00 ea | 13,448.35 /ea | 13,448 |
| VRF/Outdoor cond. unit/heat & cool - 96 mbh | 5.00 ea | 14,144.35 /ea | 70,722 |
| VRF/Outdoor cond. unit/heat & cool - 120 mbh | 4.00 ea | 15,768.35 /ea | 63,073 |
| VRF/Main-branch circuit controller/max. 10-indoor units | 9.00 ea | 498.42 /ea | 4,486 |
| VRF/Main-branch circuit controller/max. 10-indoor units (Part E) | 1.00 ea | 6,876.31 /ea | 6,876 |
| VRF/Main-branch circuit controller/max. 13-indoor units | 10.00 ea | 7,968.68 /ea | 79,687 |
| VRF/Main-branch circuit controller/max. 13-indoor units (Part E) | 1.00 ea | 7,968.68 /ea | 7,969 |
| VRF system refrigerant piping/type "ACR" hard copper/brazed | 2,850.00 lf | 48.15 /lf | 137,235 |
| VRF system refrigerant piping/type "ACR" hard copper/brazed (Part E) | 300.00 lf | 48.15 /lf | 14,446 |
| VRF system refrigerant piping/type "ACR" soft copper/brazed | 16,250.00 lf | 32.23 /lf | 523,666 |
| VRF system refrigerant piping/type "ACR" soft copper/brazed (Part E) | 2,500.00 lf | 32.23 /lf | 80,564 |
| VRF system clean & test piping system (nitrogen purge) | 21,900.00 lf | 1.03 /lf | 22,575 |
| VRF system refrigerant charge/R410B | 1,200.00 lbs | 28.10 /lbs | 33,725 |
| 238025 Mini-Split VRF Heat Pump Systems | 408,500.00 gsf | 3.51 /gsf | 1,434,402 |
| 238200 Convection Heating Units | | | |
| Terminal equipment (misc.) | 408,500.00 sf | 0.05 /sf | 20,425 |
| Terminal equipment (@ chorus/band/performing arts & support areas) | 21,550.00 sf | 0.75 /sf | 16,163 |
| Terminal equipment Recon Adjustment | 1.00 ls | 154,265.00 /ls | 154,265 |
| Duct mount coil/1.5KW electric | 1.00 ea | 1,839.88 /ea | 1,840 |
| Fan coil unit/hydronic 2-pipe/horiz. or vert. - 400 cfm | 37.00 ea | 1,037.56 /ea | 38,390 |
| Fan Powered Coil Box 4-pipe/horiz. | 142.00 ea | 2,905.36 /ea | 412,561 |
| Fan Powered Coil Box 4-pipe/horiz.per Memo | 20.00 ea | 2,905.36 /ea | 58,107 |
| - Premuim for ECM motors | 179.00 ea | 300.00 /ea | 53,700 |
| - Premuim for ECM motors per Memo | 20.00 ea | 300.00 /ea | 6,000 |
| Radiant floor heating system - 4-pipe | 14,000.00 sf | 18.80 /sf | 263,252 |
| - Manifolds | 5.00 ea | 4,302.40 /ea | 21,512 |
| PR-1 Runtal Baseboard Radiation UF/RF - 8-row | 150.00 lf | 365.23 /lf | 54,785 |
| Cabinet unit heater/hot water/wall mount/recessed - avg. size | 10.00 ea | 1,664.52 /ea | 16,645 |
| Electric Wall heaters | 6.00 ea | 825.00 /ea | 4,950 |
| Cabinet unit heater/hot water/ceiling mount - avg. size | 6.00 ea | 1,825.26 /ea | 10,952 |
| Unit heater/hot water/horiz./propeller - avg. size | 12.00 ea | 1,153.01 /ea | 13,836 |
| Unit heater/electric/horiz./propeller - avg. size | 1.00 ea | 1,243.68 /ea | 1,244 |
| Unit heater/electric/horiz./propeller - 1.5 kw/5115 btu | 2.00 ea | 844.94 /ea | 1,690 |
| Unit heater/electric/horiz./propeller - 3 kw/10,240 btu | 4.00 ea | 844.94 /ea | 3,380 |
| Unit heater/electric/horiz./propeller - 4 kw/13,640 btu | 3.00 ea | 943.68 /ea | 2,831 |
| Unit heater/electric/horiz./propeller - 7.5 kw/25,600 btu | 11.00 ea | 1,287.41 /ea | 14,162 |
| Unit heater/electric/horiz./propeller - 10 kw/34,120 btu | 4.00 ea | 1,406.15 /ea | 5,625 |
| Unit ventilator (@ kiln) | 1.00 ea | 6,569.64 /ea | 6,570 |
| 238200 Convection Heating Units | 408,500.00 gsf | 2.90 /gsf | 1,182,881 |
| 238500 HVAC Equipment VFD's | | | |
| <i>VFD w/keypad/disconnect/bypass/NEMA 1 (misc)</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| VFD w/keypad/disconnect/bypass/NEMA 1 - 1 hp | 6.00 ea | 2,569.47 /ea | 15,417 |
| VFD w/keypad/disconnect/bypass/NEMA 1 - 3 hp | 1.00 ea | 2,833.47 /ea | 2,833 |
| VFD w/keypad/disconnect/bypass/NEMA 1 - 20 hp | 16.00 ea | 4,184.47 /ea | 66,952 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| 238500 HVAC Equipment VFD's | 408,500.00 gsf | 0.21 /gsf | 85,202 |
| 239000 HVAC Equipment Rigging/Setting/Start Up | | | |
| Equipment hoisting/rigging/setting/start-up | 408,500.00 sf | 1.60 /sf | 653,600 |
| 239000 HVAC Equipment Rigging/Setting/Start Up | 408,500.00 gsf | 1.60 /gsf | 653,600 |
| D30 HVAC | 408,500.00 gsf | 70.15 /gsf | 28,655,140 |
| D30 Heating, Ventilating, and Air Conditioning (HVAC) | 408,500.00 gsf | 70.15 /gsf | 28,655,140 |
| D40 Fire Protection Systems | | | |
| D40 Fire Protection | | | |
| 210005 Fire Protection | | | |
| Sprinkler permits, as-builts, coring, fire stopping | 408,500.00 sf | 0.40 /sf | 163,400 |
| Project management | 3.00 ph | 15,000.00 /ph | 45,000 |
| Sprinkler contractor 3D/BIM costs | 3.00 ph | 5,000.00 /ph | 15,000 |
| Premium for phasing on project | 3.00 ph | 10,000.00 /ph | 30,000 |
| Fire dept. inlet connection - 2-1/2" polished brass - roof | 3.00 ea | 907.23 /ea | 2,722 |
| Post indicator valve | 3.00 ea | 500.01 /ea | 1,500 |
| Fire dept. inlet connection - Storz 6" - RECON | 2.00 ea | 1,863.93 /ea | 3,728 |
| Standpipe - sch 10 black steel piping w/ fittings | 2,475.00 lf | 59.45 /lf | 147,139 |
| Drain riser - sch 40 black steel piping w/ fittings | 650.00 lf | 36.07 /lf | 23,446 |
| Fire hose valve - 2-1/2" - pressure regulating | 38.00 ea | 362.76 /ea | 13,785 |
| Fire hose cabinet - aluminum - recessed | 38.00 ea | 1,141.44 /ea | 43,375 |
| Sprinkler head - wet - recessed pendant | 3,049.00 ea | 129.60 /ea | 395,142 |
| Sprinkler head - wet - pendant or upright | 332.00 ea | 79.74 /ea | 26,472 |
| Sprinkler head - wet - above ceiling | 45.00 ea | 100.92 /ea | 4,541 |
| Sprinkler branch piping black steel sch. 40 w/ fittings | 30,429.00 lf | 28.71 /lf | 873,610 |
| Sprinkler branch piping black steel sch. 40 w/ fittings - above ceiling | 225.00 lf | 28.71 /lf | 6,460 |
| Sprinkler main piping black steel sch. 10 w/ fittings | 10,380.00 lf | 46.00 /lf | 477,480 |
| Wet alarm valve | 5.00 ea | 4,135.52 /ea | 20,678 |
| Double check valve (BFP) assembly - 8" | 1.00 ea | 11,544.72 /ea | 11,545 |
| Zone flow control valve w/ pressure reducing valve | 17.00 ea | 2,540.52 /ea | 43,189 |
| Waterflow switch | 23.00 ea | 429.80 /ea | 9,885 |
| Tamper switch | 23.00 ea | 364.80 /ea | 8,390 |
| Test port/test header/flush mount - 4 way | 1.00 ea | 389.80 /ea | 390 |
| Sprinkler head - dry - pendant or upright | 45.00 ea | 84.74 /ea | 3,813 |
| Dry branch piping galvanized sch. 40 - w/ fittings | 450.00 lf | 33.21 /lf | 14,944 |
| Dry main piping galvanized sch. 40 - w/ fittings | 185.00 lf | 97.79 /lf | 18,091 |
| Dry alarm valve | 1.00 ea | 6,835.52 /ea | 6,836 |
| Fire pump w jockey & controller (1000 gpm, 150 hp) | 1.00 ea | 99,999.96 /ea | 100,000 |
| 210005 Fire Protection | 408,500.00 gsf | 6.15 /gsf | 2,510,560 |
| 210010 Water Curtain at Rated Walls | | | |
| Sprinkler head - water curtain | 365.00 ea | 252.99 /ea | 92,341 |
| Sprinkler branch piping black steel sch. 40 w/ fittings - water curtain feed | 1,460.00 lf | 28.71 /lf | 41,916 |
| 210010 Water Curtain at Rated Walls | 408,500.00 gsf | 0.33 /gsf | 134,258 |
| D40 Fire Protection | 408,500.00 gsf | 6.47 /gsf | 2,644,818 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| 210090 Fire Protection EBP #2 | | | |
| Rustic Fire Protection | 1.00 ls | 125,000.00 /ls | 125,000 |
| 210090 Fire Protection EBP #2 | | | 125,000 |
| D4010 FP - Early Bid Package #2 | 408,500.00 gsf | 0.31 /gsf | 125,000 |
| D40 Fire Protection Systems | 408,500.00 gsf | 6.78 /gsf | 2,769,818 |
| D50 Electrical Systems | | | |
| D50 Electrical | | | |
| 110615 Audiovisual Systems - Theater | | | |
| Auditorium devices, cabling, power, and equipment | 1.00 ls | 216,000.00 /ls | 216,000 |
| Black Box devices, cabling, power, and equipment | 1.00 ls | 60,000.00 /ls | 60,000 |
| Chorus devices, cabling, power, and equipment | 1.00 ls | 9,600.00 /ls | 9,600 |
| Band devices, cabling, power, and equipment | 1.00 ls | 9,600.00 /ls | 9,600 |
| Production Lab & Studio devices, cabling, power, and equipment | 1.00 ls | 24,000.00 /ls | 24,000 |
| 110615 Audiovisual Systems - Theater | | /gsf | 319,200 |
| 110620 Audiovisual Systems - Tech | | | |
| Tie into fire alarm system | 408,500.00 sf | 0.02 /sf | 8,170 |
| Junction box - 4" square | 30.00 ea | 57.54 /ea | 1,726 |
| Junction box - 4-11/16" square x 2-1/8" | 7.00 ea | 83.48 /ea | 584 |
| Screw cover pull box | 1.00 ea | 404.94 /ea | 405 |
| Touch panel | 4.00 ea | 1,241.80 /ea | 4,967 |
| HDMI input jack and plate | 4.00 ea | 173.89 /ea | 696 |
| Plywood blocking for displays and speakers | 10.00 ea | 214.56 /ea | 2,146 |
| <i>TV monitor - 70" Display - F&I under technology</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| <i>TV monitor - 90" Display - F&I under technology</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| <i>TV monitor - 98" Display - F&I under technology</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| Video intercom 60" LCD master monitor | 1.00 ea | 1,328.09 /ea | 1,328 |
| Wall audio plate for line-in and microphone | 4.00 ea | 1,164.82 /ea | 4,659 |
| A/V floor box | 1.00 ea | 1,819.76 /ea | 1,820 |
| A/V rack enclosure | 4.00 ea | 1,046.48 /ea | 4,186 |
| Laser projector | 3.00 ea | 35,739.44 /ea | 107,218 |
| Empty conduit (EMT): 3/4" | 448.00 lf | 5.33 /lf | 2,386 |
| Empty conduit (EMT): 1" | 532.00 lf | 6.51 /lf | 3,465 |
| Empty conduit (EMT): 1.25" | 235.00 lf | 8.35 /lf | 1,963 |
| Empty conduit (EMT): 1.5" | 135.00 lf | 9.80 /lf | 1,323 |
| Empty conduit (EMT): 2" | 142.00 lf | 11.58 /lf | 1,645 |
| Empty conduit (EMT): 2.5" | 39.00 lf | 22.11 /lf | 862 |
| Control console | 3.00 ea | 16,639.52 /ea | 49,919 |
| Keypad, Nortek EI212SE | 1.00 ea | 491.71 /ea | 492 |
| Motorized projector lift | 1.00 ea | 728.15 /ea | 728 |
| Bluetooth audio receiver | 1.00 ea | 402.47 /ea | 402 |
| Projector screen - 100" x 160" | 1.00 ea | 2,472.41 /ea | 2,472 |
| Projector screen - 177" x 284" | 1.00 ea | 6,949.82 /ea | 6,950 |
| Projector screen - 72" x 116" | 1.00 ea | 1,832.41 /ea | 1,832 |
| A/V equipment power connection | 25.00 ea | 269.94 /ea | 6,749 |
| 110620 Audiovisual Systems - Tech | | /gsf | 219,093 |
| 260005 Electrical - Misc | | | |
| Laborer for trade support - Electric | 45.00 wks | 4,334.00 /wks | 195,030 |
| Laborer for trade support - Electric | (45.00) wks | 4,334.00 /wks | (195,030) |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 260005 Electrical - Misc | | | |
| Coordination of switchboard dimensions and feeder routing | 60.00 mh | 123.24 /mh | 7,394 |
| Coordination of routing of PV conduit distribution system | 80.00 mh | 123.24 /mh | 9,859 |
| Coordination of Fusco building new and adaptation of existing power | 100.00 mh | 123.24 /mh | 12,324 |
| Coordination of lighting control zones for light shafts, corridors, classrooms, open areas | 100.00 mh | 123.24 /mh | 12,324 |
| Coordination of power connections to Auditorium and Performing Arts | 40.00 mh | 123.24 /mh | 4,930 |
| Coordination of theatrical lighting controls with BMS | 24.00 mh | 123.24 /mh | 2,958 |
| Coordination of Auditorium house lighting with walls and ceiling | 80.00 mh | 123.24 /mh | 9,859 |
| Coordination of Performing Arts facade lighting with walls | 60.00 mh | 123.24 /mh | 7,394 |
| Coordination of power to door hardware equipment and access control features | 200.00 mh | 123.24 /mh | 24,648 |
| Coordination of power to water heaters | 4.00 mh | 123.24 /mh | 493 |
| Coordination of power to new and existing telecom | 16.00 mh | 123.24 /mh | 1,972 |
| Coordination of fire alarm and fire protection | 24.00 mh | 123.24 /mh | 2,958 |
| Coordination of lighting and power to Toilet Facility | 30.00 mh | 123.24 /mh | 3,697 |
| Temp light stringers & GFCI power | 772.00 sf | 0.50 /sf | 386 |
| Coring - patching - firestopping | 408,500.00 sf | 0.13 /sf | 51,063 |
| Project management | 800.00 mh | 123.24 /mh | 98,592 |
| Electrical contractor 3D/BIM costs | 408,500.00 sf | 0.22 /sf | 89,870 |
| Testing & seismic | 1.00 ls | 45,000.00 /ls | 45,000 |
| Testing & seismic | 1.00 ls | 500.00 /ls | 500 |
| Premium for phasing on project | 1.00 ls | 75,000.00 /ls | 75,000 |
| Hoisting & rigging (switchboard) | 1.00 ls | 74,999.67 /ls | 75,000 |
| | | /gsf | 536,221 |
| 260010 Temporary Lighting, Power & FA | | | |
| Temporary light stringers and GFI power drops | 408,500.00 sf | 0.50 /sf | 204,250 |
| Temporary electric service (400A @ 480V) | 2.00 ea | 20,315.52 /ea | 40,631 |
| Temp power for welders - ph 2,3 | 7.00 ea | 12,593.68 /ea | 88,156 |
| Temp power for trailer | 10.00 ea | 1,559.16 /ea | 15,592 |
| Temp internet connection for trailer | 8.00 ea | 2,155.78 /ea | 17,246 |
| Fire alarm impairment plan (NFPA-101 / NFPA-241) | 1.00 ls | 5,000.00 /ls | 5,000 |
| | | /gsf | 370,875 |
| 260505 Enabling Work for Electrical | | | |
| Make-safe electrical demolition (removal/disposal by others) | 1.00 ls | 59,000.00 /ls | 59,000 |
| Interface new and existing fire alarm to meet phasing requirements | 1.00 ea | 17,359.20 /ea | 17,359 |
| Remove FUSCO including fire alarm and electric services | 2.00 ls | 15,091.60 /ls | 30,183 |
| Remove existing sports lighting and cut post foundation below grade | 1.00 ea | 7,499.97 /ea | 7,500 |
| <i>Remove primary and secondary electric service to Downs House</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| <i>Remove primary and secondary electric service to Red Gym</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| Demolish temporary parking area lighting | 1.00 ls | 5,000.00 /ls | 5,000 |
| Re-route existing sports lighting circuits to avoid new field drainage | 2.00 ls | 31,500.00 /ls | 63,000 |
| Relocate press box and elevator feeders | 1.00 ls | 50,000.00 /ls | 50,000 |
| Relocate power for dugouts | 0.00 ls | /ls | 3,462 |
| Remove existing underground telephone service | 390.00 lf | 5.00 /lf | 1,950 |
| Remove existing underground primary electric service | 250.00 lf | 10.00 /lf | 2,500 |
| Remove enabling primary electric service | 1.00 ls | 10,000.00 /ls | 10,000 |
| | | /gsf | 249,954 |
| 260526 Grounding and Bonding for Electrical Systems | | | |
| Building grounding & bonding | 408,500.00 sf | 0.11 /sf | 44,302 |
| Exterior (utility) transformer - grounding & bonding | 2.00 ea | 1,288.42 /ea | 2,577 |
| Exterior (sports lighting) transformer - grounding & bonding | 1.00 ea | 1,288.42 /ea | 1,288 |
| Primary switch - grounding & bonding | 1.00 ea | 1,288.42 /ea | 1,288 |
| Dry-type transformer grounding | 30.00 ea | 252.87 /ea | 7,586 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|-----------------|---------------|
| 260526 Grounding and Bonding for Electrical Systems | | | |
| Copper ground bar - 2"x1/4" (ea.) | 1.00 ea | 336.48 /ea | 336 |
| Copper ground bar terminations | 8.00 ea | 89.12 /ea | 713 |
| Ground rods | 4.00 ea | 284.98 /ea | 1,140 |
| Bare copper wire - #6 | 50.00 lf | 1.40 /lf | 70 |
| Bare copper wire - #2/0 | 250.00 lf | 3.95 /lf | 987 |
| 260526 Grounding and Bonding for Electrical Systems | | /gsf | 60,288 |
| 260583 Equipment Wiring | | | |
| Feeder (PVC/CU) - 40A [EVC] | 3,800.00 lf | 8.93 /lf | 33,941 |
| Feeder (EMT/CU) - 60A | 1,500.00 lf | 16.76 /lf | 25,140 |
| Feeder (EMT/CU) - 100A | 200.00 lf | 23.15 /lf | 4,630 |
| Feeder (EMT/CU) - 400A | 700.00 lf | 81.46 /lf | 57,023 |
| Feeder (EMT/CU) - 800A | 600.00 lf | 151.94 /lf | 91,166 |
| Power (120V) for ATC panels | 75.00 ea | 516.37 /ea | 38,728 |
| Power (120V) for ATC panel | 1.00 ea | 516.37 /ea | 516 |
| Fused Disco: 20A, 240V/3P, NEMA-1 [Kitchen] | 10.00 ea | 380.94 /ea | 3,809 |
| Fused Disco: 20A, 240V/3P, NEMA-1 [MBL] | 2.00 ea | 380.94 /ea | 762 |
| Fused Disco: 60AF, 600V/3P, NEMA-1 | 1.00 ea | 954.84 /ea | 955 |
| Fused Disco: 60A, 600V/3P, NEMA-3R | 3.00 ea | 1,152.07 /ea | 3,456 |
| Fused Disco: 100AF, 240V/3P, NEMA-1 | 2.00 ea | 1,641.37 /ea | 3,283 |
| Fused Disco: 400A, 600V/3P, NEMA-3R | 2.00 ea | 2,892.32 /ea | 5,785 |
| Fused Disco: 600A, 600V/3P, NEMA-1 | 1.00 ea | 3,127.33 /ea | 3,127 |
| Fused Disco: 800A, 600V/3P, NEMA-1 | 4.00 ea | 6,262.35 /ea | 25,049 |
| Shot timer controls | 1.00 ea | 1,916.32 /ea | 1,916 |
| Power and low voltage control for motorized skylight shades (20' AFF) | 7.00 ea | 802.18 /ea | 5,615 |
| Power and low voltage control for motorized window shades (20' AFF) | 48.00 ea | 802.18 /ea | 38,505 |
| Kitchen kilns | 4.00 ea | 2,186.84 /ea | 8,747 |
| Motorized backstops and curtains | 8.00 ea | 2,634.08 /ea | 21,073 |
| Motorized backdrop | 1.00 ea | 2,634.08 /ea | 2,634 |
| Fire pump (150HP) | 1.00 ea | 6,443.68 /ea | 6,444 |
| Elevators and controllers | 3.00 ea | 5,197.20 /ea | 15,592 |
| Motor starters | 26.00 ea | 474.17 /ea | 12,328 |
| Install and wire VFD's (furnished by Division 23) | 35.00 ea | 1,040.92 /ea | 36,432 |
| Elevator cab lights / fan | 3.00 ea | 2,485.92 /ea | 7,458 |
| Misc. terminal equipment | 408,500.00 sf | 0.05 /sf | 21,424 |
| Cabinet unit heaters (hot water) | 16.00 ea | 816.20 /ea | 13,059 |
| Unit heaters (hot water) | 12.00 ea | 816.20 /ea | 9,794 |
| Unit ventilator (kiln) | 1.00 ea | 1,324.92 /ea | 1,325 |
| Unit heaters | 2.00 ea | 816.20 /ea | 1,632 |
| Electric unit wallheaters | 5.00 ea | 1,415.92 /ea | 7,080 |
| Fan powered boxes w/ 4-pipes | 145.00 ea | 1,014.44 /ea | 147,094 |
| Fan powered boxes w/ 2-pipes | 32.00 ea | 1,014.44 /ea | 32,462 |
| Radiant floor manifolds | 5.00 ea | 458.10 /ea | 2,291 |
| Elevator penthouse louvered vent | 3.00 ea | 1,541.38 /ea | 4,624 |
| Dust collector (4000cfm) | 1.00 ea | 6,197.20 /ea | 6,197 |
| VRF indoor units | 150.00 ea | 989.44 /ea | 148,416 |
| VRF outdoor units | 21.00 ea | 2,525.36 /ea | 53,033 |
| VRF branch circuit controllers | 21.00 ea | 682.96 /ea | 14,342 |
| Mini-split system indoor units | 9.00 ea | 1,076.44 /ea | 9,688 |
| Mini-split system outdoor units | 2.00 ea | 3,664.80 /ea | 7,330 |
| Hot water pumps (20hp) | 10.00 ea | 3,138.32 /ea | 31,383 |
| Chilled water pumps (20hp) | 10.00 ea | 3,138.32 /ea | 31,383 |
| Heat recovery condensing units | 43.00 ea | 5,197.20 /ea | 223,480 |
| Condensate pumps | 263.00 ea | 457.29 /ea | 120,267 |
| Glycol feed pumps | 4.00 ea | 1,485.92 /ea | 5,944 |
| Energy recovery units | 4.00 ea | 10,394.40 /ea | 41,578 |
| Kitchen HV unit | 1.00 ea | 10,394.40 /ea | 10,394 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|------------------|
| 260583 Equipment Wiring | | | |
| Heat recovery units | 15.00 ea | 10,394.40 /ea | 155,916 |
| VAV boxes w/ electric coils | 78.00 ea | 1,385.92 /ea | 108,102 |
| Electric water heaters (60A) | 9.00 ea | 2,721.84 /ea | 24,497 |
| Electric water heaters / point of service | 26.00 ea | 1,420.92 /ea | 36,944 |
| Electric water heater (60A) | 1.00 ea | 2,721.84 /ea | 2,722 |
| Air cooled chillers (176T) | 2.00 ea | 15,824.00 /ea | 31,648 |
| Exhaust fans | 17.00 ea | 2,228.88 /ea | 37,891 |
| Air cooled heat pumps (335T) | 2.00 ea | 19,788.80 /ea | 39,578 |
| Misc. exhaust fans | 408,500.00 sf | 0.05 /sf | 20,423 |
| Destratification fans | 4.00 ea | 1,360.92 /ea | 5,444 |
| Exhaust fans | 2.00 ea | 1,645.78 /ea | 3,292 |
| Sensor flush valves | 156.00 ea | 170.92 /ea | 26,663 |
| Temporary boilers and boiler pumps | 2.00 ea | 3,138.32 /ea | 6,277 |
| Electric boilers | 2.00 ea | 2,008.70 /ea | 4,017 |
| Temporary fuel oil pump | 1.00 ea | 3,264.80 /ea | 3,265 |
| Boiler circulation pumps | 8.00 ea | 1,453.92 /ea | 11,631 |
| Rental steam boilers | 1.00 ls | 5,697.20 /ls | 5,697 |
| Hot water heaters | 4.00 ea | 703.94 /ea | 2,816 |
| Electric hand dryers | 3.00 ea | 826.94 /ea | 2,481 |
| Electric water coolers | 35.00 ea | 608.10 /ea | 21,284 |
| Electric water cooler | 1.00 ea | 608.10 /ea | 608 |
| Recirculation pumps | 6.00 ea | 1,210.88 /ea | 7,265 |
| Duplex air compressor | 1.00 ea | 940.39 /ea | 940 |
| Acid neut. system | 1.00 ea | 1,909.41 /ea | 1,909 |
| 260583 Equipment Wiring | | /gsf | 1,959,645 |
| 260923 Lighting Control Devices | | | |
| On-site programming & startup (manufacturer) | 1.00 ls | 14,859.20 /ls | 14,859 |
| Single pole switch (120/277V) | 56.00 ea | 80.18 /ea | 4,490 |
| Single pole switch (120/277V) - W.P. | 2.00 ea | 122.30 /ea | 245 |
| Low voltage switch | 731.00 ea | 178.16 /ea | 130,232 |
| Low voltage override switch | 85.00 ea | 224.64 /ea | 19,094 |
| Digital wall (scene) switch, 3-button | 3.00 ea | 249.56 /ea | 749 |
| Wall PIR occupancy sensor (24VDC) | 21.00 ea | 273.09 /ea | 5,735 |
| Wall PIR vacancy sensor (24VDC) | 8.00 ea | 273.09 /ea | 2,185 |
| Wall PIR occupancy sensor (24VDC) | 2.00 ea | 273.09 /ea | 546 |
| Ceiling US vacancy sensor (24VDC) | 13.00 ea | 350.37 /ea | 4,555 |
| Ceiling US occupancy sensor (24VDC) | 1,129.00 ea | 350.37 /ea | 395,566 |
| Occupancy sensor power pack (120V) | 3.00 ea | 89.95 /ea | 270 |
| Low voltage dimmer switch | 121.00 ea | 150.78 /ea | 18,245 |
| Light sensing photocell | 169.00 ea | 325.83 /ea | 55,065 |
| Digital dimming room controller, 3-relay - allowance (ea.) | 350.00 allw | 476.42 /allw | 166,746 |
| Emergency lighting transfer (bypass) device | 109.00 ea | 476.70 /ea | 51,960 |
| Emergency lighting transfer station controller ELTS | 2.00 ea | 2,117.70 /ea | 4,235 |
| Wireless network bridges | 231.00 ea | 300.00 /ea | 69,300 |
| Interface with BMS | 1.00 ea | 912.96 /ea | 913 |
| Lighting control racks | 10.00 ea | 1,451.96 /ea | 14,520 |
| Backfeed existing lighting control box | 1.00 ea | 4,971.84 /ea | 4,972 |
| Connect to main building networked lighting controls | 1.00 ea | 842.96 /ea | 843 |
| Lighting control panel, 8-relay | 20.00 ea | 2,904.00 /ea | 58,080 |
| Tie to main building lighting control system | 1.00 ea | 2,485.92 /ea | 2,486 |
| MC Cable (12/2) - 20A | 17,430.00 lf | 4.23 /lf | 73,688 |
| MC Cable (12/3) - 20A | 1,450.00 lf | 4.65 /lf | 6,738 |
| Digital lighting LV cable | 7,500.00 lf | 4.51 /lf | 33,804 |
| EMT (12/2) - 20A | 1,050.00 lf | 8.25 /lf | 8,661 |
| EMT (10/2) - 20A | 3,270.00 lf | 8.32 /lf | 27,190 |
| 3-circuits in 3/4" EMT - 20A | 500.00 lf | 15.56 /lf | 7,778 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|------------------|
| 260923 Lighting Control Devices | | | |
| RJ45 Cable, 15LF (plenum-rated) | 500.00 ea | 86.50 /ea | 43,251 |
| 260923 Lighting Control Devices | | /gsf | 1,227,001 |
| 262700 Distribution Equipment | | | |
| Normal power distribution equipment | 408,500.00 sf | 0.25 /sf | 102,125 |
| Short circuit / arc flash / selective coordination | 1.00 ea | 10,000.00 /ea | 10,000 |
| Backfeed existing lighting and power panel boards from Phase 1/4 | 1.00 ls | 29,788.80 /ls | 29,789 |
| EV charging station service (125A) | 1.00 ea | 9,613.64 /ea | 9,614 |
| EV charging station service (200A) | 1.00 ea | 12,444.08 /ea | 12,444 |
| Enclosed circuit breaker: 225A/3P | 1.00 ea | 2,587.32 /ea | 2,587 |
| Electrical wireway - 12"x12"x36"L | 42.00 ea | 955.84 /ea | 40,145 |
| 225A/3P enclosed C/B - 600V (N1) | 2.00 ea | 3,476.25 /ea | 6,952 |
| EPO / shut trip MCB for panelboards | 22.00 ea | 757.96 /ea | 16,675 |
| Multiple meter unit | 19.00 ea | 2,447.40 /ea | 46,501 |
| MSB-PVB1: 1200A | 1.00 ea | 26,444.90 /ea | 26,445 |
| MSB-OS2-CHE: 1200A | 1.00 ea | 26,444.90 /ea | 26,445 |
| MSB-SD-1B: 1600A | 1.00 ea | 30,484.40 /ea | 30,484 |
| MSB-1BBC: 2000A | 1.00 ea | 36,226.60 /ea | 36,227 |
| MSB-OS-1B: 2000A | 1.00 ea | 36,226.60 /ea | 36,227 |
| MSB-OS-E: 2500A | 1.00 ea | 42,474.00 /ea | 42,474 |
| MSB-OS-C: 2500A | 1.00 ea | 42,474.00 /ea | 42,474 |
| MSB-GEN: 2500A | 1.00 ea | 42,474.00 /ea | 42,474 |
| MSB-PV-SITE: 3000A, (12) 3-pole space | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-PV-BLDG: 3000A, (12) 3-pole space | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-A: 3000A, (12) 3-pole space | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-B: 3000A, (12) 3-pole space | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-OS-E: 3000A | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-D: 3000A | 1.00 ea | 48,553.00 /ea | 48,553 |
| MSB-1BM: 4000A | 1.00 ea | 58,632.00 /ea | 58,632 |
| Panelboard - 100A | 65.00 ea | 3,021.84 /ea | 196,420 |
| Panelboard - 225A | 45.00 ea | 4,024.80 /ea | 181,116 |
| Panelboard: 225A | 1.00 ea | 4,024.80 /ea | 4,025 |
| Panelboard - 400A | 5.00 ea | 6,284.24 /ea | 31,421 |
| Distribution panel - 225A | 4.00 ea | 11,289.60 /ea | 45,158 |
| Distribution panel - 400A | 38.00 ea | 11,289.60 /ea | 429,005 |
| Distribution panel - 500A | 1.00 ea | 11,289.60 /ea | 11,290 |
| Distribution panel - 600A | 8.00 ea | 11,289.60 /ea | 90,317 |
| Distribution panel - 800A | 3.00 ea | 12,969.60 /ea | 38,909 |
| Distribution panel - 1000A | 1.00 ea | 12,969.60 /ea | 12,970 |
| Distribution panel - 1200A | 3.00 ea | 12,969.60 /ea | 38,909 |
| Transformer: floor/wall - 30kVA, 480V:208V | 1.00 ea | 2,778.88 /ea | 2,779 |
| Transformer: floor/wall - 45kVA, 480V:208V | 7.00 ea | 3,165.36 /ea | 22,158 |
| Transformer: floor/wall - 75kVA, 480V:208V | 13.00 ea | 4,769.80 /ea | 62,007 |
| Transformer: floor/wall - 112.5kVA, 480V:208V (for T6) | 5.00 ea | 6,249.00 /ea | 31,245 |
| Transformer: floor/wall - 150kVA, 480V:208V | 1.00 ea | 8,252.20 /ea | 8,252 |
| Transformer: floor - 225kVA, 480V:208V | 3.00 ea | 11,212.20 /ea | 33,637 |
| 262700 Distribution Equipment | | /gsf | 2,149,648 |
| 262705 Distribution Feeders | | | |
| Mineral insulated (MI cable) | 408,500.00 sf | 0.25 /sf | 102,125 |
| Feeder (PVC/CU) - 400A | 30.00 lf | 60.16 /lf | 1,805 |
| Feeder (EMT/CU) - 15A [MMU's] | 1,425.00 lf | 8.82 /lf | 12,567 |
| Feeder (EMT/CU) - 125A | 15.00 lf | 24.52 /lf | 368 |
| Feeder (EMT/AL) - 100A | 3,725.00 lf | 21.16 /lf | 78,813 |
| Feeder (EMT/AL) - 125A | 50.00 lf | 24.73 /lf | 1,236 |
| Feeder (EMT/AL) - 225A | 4,900.00 lf | 47.75 /lf | 233,949 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|-----------------|------------------|
| 262705 Distribution Feeders | | | |
| Feeder (EMT/AL) - 400A | 2,525.00 lf | 69.50 /lf | 175,497 |
| Feeder (EMT/AL) - 600A | 2,700.00 lf | 109.75 /lf | 296,313 |
| Feeder (EMT/AL) - 800A | 1,000.00 lf | 156.40 /lf | 156,399 |
| Feeder (EMT/AL) - 2000A | 70.00 lf | 433.32 /lf | 30,332 |
| Feeder (EMT/AL) - 3000A | 70.00 lf | 508.73 /lf | 35,611 |
| Feeder (EMT/AL) - 4000A | 70.00 lf | 593.27 /lf | 41,529 |
| Empty conduit (EMT): 1.25" [metering] | 1,000.00 lf | 8.44 /lf | 8,436 |
| Empty conduit (sch 40 PVC) - 2 x 3" | 1,300.00 lf | 29.32 /lf | 38,112 |
| Feeder (MC) - 50A | 40.00 lf | 7.48 /lf | 299 |
| Feeder (MC) - 80A | 20.00 lf | 9.23 /lf | 185 |
| Feeder (MC) - 100A | 40.00 lf | 12.17 /lf | 487 |
| Feeder (MC) - 125A | 100.00 lf | 13.81 /lf | 1,381 |
| Feeder (MC) - 150A | 20.00 lf | 20.85 /lf | 417 |
| Feeder (MC) - 175A | 40.00 lf | 28.52 /lf | 1,141 |
| Feeder (MC) - 225A | 100.00 lf | 37.38 /lf | 3,738 |
| Feeder (MC) - 175A | 40.00 lf | 28.52 /lf | 1,141 |
| Feeder (MC) - 225A | 20.00 lf | 37.38 /lf | 748 |
| Feeder (MC) - 175A | 80.00 lf | 28.52 /lf | 2,282 |
| Feeder (MC) - 225A | 10.00 lf | 37.38 /lf | 374 |
| Feeder (MC) - 400A | 240.00 lf | 65.69 /lf | 15,766 |
| Feeder (MC) - 600A | 60.00 lf | 92.87 /lf | 5,572 |
| Feeder (MC) - 800A | 40.00 lf | 123.19 /lf | 4,927 |
| 262705 Distribution Feeders | | /gsf | 1,251,551 |
| 262726 Wiring Devices | | | |
| MC Cable (12/2) - 20A | 46,800.00 lf | 4.23 /lf | 197,853 |
| MC Cable (10/2) - 20A [cord reels] | 6,675.00 lf | 5.21 /lf | 34,770 |
| MC Cable (10/2) - 20A [floor boxes] | 5,900.00 lf | 5.21 /lf | 30,733 |
| MC Cable (10/4) - 30A | 3,500.00 lf | 5.60 /lf | 19,587 |
| MC Cable (6/4) - 30A | 1,800.00 lf | 7.45 /lf | 13,417 |
| Isolated Ground MC Cable (12/2) - 20A | 900.00 lf | 4.07 /lf | 3,660 |
| EMT (12/2) - 20A | 8,250.00 lf | 8.25 /lf | 68,050 |
| EMT (10/2) - 30A [floor boxes under deck] | 1,180.00 lf | 8.58 /lf | 10,120 |
| Duplex receptacle - 20A | 1,049.00 ea | 83.25 /ea | 87,329 |
| Duplex receptacle - 20A - controlled | 1,110.00 ea | 101.74 /ea | 112,926 |
| Duplex receptacle - 20A - GFCI | 856.00 ea | 110.24 /ea | 94,366 |
| Duplex receptacle - 20A - GFCI - W.P. | 3.00 ea | 151.54 /ea | 455 |
| Quadruplex receptacle - 20A | 58.00 ea | 114.89 /ea | 6,664 |
| Quadruplex receptacle - 20A - controlled | 513.00 ea | 133.38 /ea | 68,423 |
| Duplex receptacle - 20A - USB | 9.00 ea | 99.44 /ea | 895 |
| Twist-lock receptacle - 20A - L5-20R | 12.00 ea | 86.24 /ea | 1,035 |
| Twist-lock receptacle - 20A - L6-20R | 1.00 ea | 87.15 /ea | 87 |
| Special receptacle - 30A | 35.00 ea | 115.60 /ea | 4,046 |
| Special receptacle - 50A | 18.00 ea | 151.62 /ea | 2,729 |
| Floor box - 2 gang outlet/data | 59.00 ea | 996.72 /ea | 58,806 |
| Power junction w/feed (MC) - 20A (FA) | 1.00 ea | 261.37 /ea | 261 |
| Power junction w/feed (MC) - 20A [misc.] | 320.00 ea | 396.48 /ea | 126,874 |
| Trash compactor feed & connection | 1.00 ea | 2,715.08 /ea | 2,715 |
| Emergency power off (EPO) | 25.00 ea | 357.35 /ea | 8,934 |
| Pull box - 18"x18" x6" | 21.00 ea | 753.71 /ea | 15,828 |
| Pull boxes - 40"x40"x24" | 6.00 ea | 1,330.49 /ea | 7,983 |
| Cord reel (20A) w/ duplex receptacle | 89.00 ea | 337.52 /ea | 30,039 |
| 262726 Wiring Devices | | /gsf | 1,008,586 |
| 263200 Packaged Generator Assemblies | | | |
| Diesel generator: 2000kW, 2500kVA, 277/480V | 1.00 ea | 647,699.73 /ea | 647,700 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|-----------------|----------------|
| 263200 Packaged Generator Assemblies | | | |
| Generator grounding | 1.00 ea | 989.44 /ea | 989 |
| Generator testing & start-up | 1.00 ea | 14,929.60 /ea | 14,930 |
| Generator setting & rigging (grade level) | 1.00 ea | 36,971.84 /ea | 36,972 |
| Sound attenuated, non-walk-in weatherproof enclosure | 1.00 ea | 72,894.40 /ea | 72,894 |
| Starting circuit - 2#14 MI cable (4" PVC) | 75.00 lf | 14.02 /lf | 1,051 |
| Remote annunciator panel - 16#14 (4" PVC) | 100.00 lf | 18.47 /lf | 1,847 |
| Generator EPO and wiring | 2.00 ea | 581.34 /ea | 1,163 |
| Camlock connection box | 1.00 ea | 1,938.03 /ea | 1,938 |
| 263200 Packaged Generator Assemblies | | /gsf | 779,484 |
| 263600 Transfer Switches | | | |
| ATS-LRS: 400A, 480V/3P w/ iso by-pass | 1.00 ea | 20,270.07 /ea | 20,270 |
| ATS-E: 400A, 480V/3P w/ iso by-pass | 1.00 ea | 20,270.07 /ea | 20,270 |
| ATS-OS-C: 3000A, 480V/3P w/ iso by-pass | 1.00 ea | 146,094.40 /ea | 146,094 |
| ATS-OS-E: 3000A, 480V/3P w/ iso by-pass | 1.00 ea | 146,094.40 /ea | 146,094 |
| MTS - no iso by-pass - open trans - 400A | 1.00 ea | 3,523.95 /ea | 3,524 |
| Wire fire pump controller (furnished and installed by Div. 21) | 1.00 ea | 2,964.80 /ea | 2,965 |
| 263600 Transfer Switches | | /gsf | 339,218 |
| 264000 Lightning Protection | | | |
| Lightning protection system | 1.00 ls | 175,000.00 /ls | 175,000 |
| 264000 Lightning Protection | | /gsf | 175,000 |
| 265000 Lighting | | | |
| XCS1: white face green letters thermoplastic exit sign [B] | 7.00 ea | 143.80 /ea | 1,007 |
| XRC1: edge-lit green LED exit sign [B] | 94.00 ea | 205.48 /ea | 19,315 |
| XRC2: edge-lit green LED exit sign [B] | 37.00 ea | 219.70 /ea | 8,129 |
| XRC3: edge-lit green LED exit sign [B] | 5.00 ea | 205.49 /ea | 1,027 |
| XRC4: edge-lit green LED exit sign [B] | 15.00 ea | 205.48 /ea | 3,082 |
| XRC5: edge-lit green LED exit sign [B] | 1.00 ea | 219.71 /ea | 220 |
| XWS1: edge-lit green LED exit sign [B] | 43.00 ea | 219.71 /ea | 9,447 |
| XWS2: white face green letters die cast aluminum exit sign [B] | 17.00 ea | 223.45 /ea | 3,799 |
| XWS3: white face green letters wet label vandal resistant exit sign [B] | 5.00 ea | 415.93 /ea | 2,080 |
| XWS4: white face green letters wet label vandal resistant exit sign [B] | 12.00 ea | 415.94 /ea | 4,991 |
| XWS5: edge-lit green LED exit sign [B] | 7.00 ea | 216.16 /ea | 1,513 |
| XWS6: black face green letters die cast aluminum exit sign [B] | 2.00 ea | 146.85 /ea | 294 |
| XWS7: master/remote white face green letters exit sign [B] | 2.00 ea | 256.97 /ea | 514 |
| PC01 - LED Direct/Indirect pendant [B] | 6,106.00 lf | 119.10 /lf | 727,225 |
| PC02 - LED Direct/Indirect pendant [B] | 1,398.00 lf | 147.55 /lf | 206,275 |
| PC1B - 14' diameter fixture [B] | 28.00 lf | 153.33 /lf | 4,293 |
| RW01 - downlight [C] | 47.00 ea | 600.73 /ea | 28,234 |
| PC04 - 4' LED Utility Strip [B] | 44.00 ea | 163.65 /ea | 7,201 |
| PC04A - 4' LED Utility Strip [B] | 68.00 ea | 183.30 /ea | 12,464 |
| PC05 - 4' Ring Pendant [B] | 7.00 ea | 1,960.41 /ea | 13,723 |
| PC06 - 6' Ring Pendant [B] | 19.00 ea | 2,611.42 /ea | 49,617 |
| PC07 - Jelly Jar [B] | 36.00 ea | 369.07 /ea | 13,287 |
| PC08 - 8' LED Utility Strip With Lens [B] | 37.00 ea | 266.62 /ea | 9,865 |
| Continuous LED | 106.00 lf | 553.75 /lf | 58,697 |
| PC10 - 2' Diameter Ring Pendant [B] | 14.00 ea | 5,153.10 /ea | 72,143 |
| RC55 - downlight [B] | 6.00 ea | 265.86 /ea | 1,595 |
| PC12 - 12' Diameter Ring Pendant [B] | 2.00 ea | 4,044.07 /ea | 8,088 |
| PC14T - downlight [C] | 16.00 ea | 709.63 /ea | 11,354 |
| PC14 - 6" Diameter Pendant Cylinder [B] | 26.00 ea | 538.24 /ea | 13,994 |
| PC15 - 8' Diameter Ring Pendant [C] | 3.00 ea | 5,864.36 /ea | 17,593 |
| PC16 - Direct/Indirect Pendant [B] | 1,649.00 lf | 139.03 /lf | 229,260 |
| PC38 [B] | 4.00 ea | 740.92 /ea | 2,964 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|--------------|
| 265000 Lighting | | | |
| Type PC34 T- suspended linear LED strip | 207.00 lf | 791.78 /lf | 163,898 |
| PC13 | 46.00 ea | 791.78 /ea | 36,422 |
| PC23 [B] | 6.00 ea | 768.09 /ea | 4,609 |
| PC19 - Linear Acoustic Lighted Baffle | 1,520.00 lf | 95.57 /lf | 145,266 |
| PC20 - Pendant Whiteboard Wall Washer | 185.00 lf | 147.68 /lf | 27,321 |
| PC22 - New Auditorium Downlight Can | 46.00 ea | 613.69 /ea | 28,230 |
| PC24 - Linear Forward Throw Indirect Pendant | 253.00 lf | 126.48 /lf | 31,999 |
| PC25 - Small Decorative Glass Pendant [B] | 23.00 ea | 766.39 /ea | 17,627 |
| PC31 [B] | 8.00 ea | 503.98 /ea | 4,032 |
| PC27 - 3' Diameter Ring Pendant [C] | 3.00 ea | 1,847.32 /ea | 5,542 |
| PC29 - Melissa's New Teardrop D-Lab Pendant [B] | 13.00 ea | 483.19 /ea | 6,281 |
| PC30 - Reception Desk Pendant [B] | 4.00 ea | 665.35 /ea | 2,661 |
| PC31 - 6" Diameter Pendant Cylinder [B] | 91.00 ea | 608.50 /ea | 55,373 |
| PC36 [B] | 279.00 lf | 266.91 /lf | 74,468 |
| PC33 [B] | 1.00 ea | 991.90 /ea | 992 |
| RB03 - Tunable LED Segmented Curvable LED Cove [B] | 1,325.00 lf | 88.34 /lf | 117,051 |
| RB06 [B] | 98.00 lf | 227.77 /lf | 22,321 |
| RB07 [B] | 136.00 lf | 231.07 /lf | 31,426 |
| PC35 [B] | 151.00 lf | 234.14 /lf | 35,355 |
| RB09 - 1" Wide extrusion [B] | 92.00 lf | 172.76 /lf | 15,894 |
| RB09T - 1" Wide extrusion [B] | 17.00 lf | 172.76 /lf | 2,937 |
| RB04 [B] | 168.00 lf | 138.61 /lf | 23,287 |
| RB11 - 12" RGBW Modules [B] | 25.00 ea | 376.26 /ea | 9,406 |
| RB13 - Opal Lens Upright 1"x1" Extrusion [B] | 34.00 lf | 161.37 /lf | 5,487 |
| RB16 [C] | 111.00 lf | 152.87 /lf | 16,969 |
| RB16T - LED Strip in channel [B] | 410.00 lf | 94.97 /lf | 38,938 |
| RB17T [B] | 152.00 lf | 186.49 /lf | 28,347 |
| RC01 - 6-8" Diameter Lensed Downlight [B] | 38.00 ea | 180.27 /ea | 6,850 |
| RC02 - Wet Label Lensed Downlight [B] | 35.00 ea | 244.77 /ea | 8,567 |
| RC04 - 4' Diameter LED Recessed Dome [C] | 13.00 ea | 1,120.46 /ea | 14,566 |
| RB08 - sconce [C] | 6.00 ea | 155.63 /ea | 934 |
| RC03 [C] | 4.00 ea | 234.18 /ea | 937 |
| RC05 - 4" Wide LED Lensed ceiling slot [B] | 3,631.00 lf | 88.83 /lf | 322,542 |
| RC06 - LED Recessed Wall Slot [B] | 426.00 lf | 94.97 /lf | 40,457 |
| RC07 - 4" Wide LED Lensed ceiling slot [B] | 88.00 lf | 117.29 /lf | 10,322 |
| RC09 - 8" Dia Recessed LED Downlight [B] | 31.00 ea | 143.41 /ea | 4,446 |
| RC13 - Recessed Downlight [B] | 31.00 ea | 381.78 /ea | 11,835 |
| RC14 - LED 2'x4' Flat Panel [B] | 158.00 ea | 189.44 /ea | 29,931 |
| RC15 - LED Kitchen Troffer [B] | 35.00 ea | 504.86 /ea | 17,670 |
| RC16 - Recessed Shower Light [B] | 19.00 ea | 308.49 /ea | 5,861 |
| RC17 - LED Lensed Downlight [B] | 143.00 ea | 353.07 /ea | 50,489 |
| RC19 [C] | 8.00 ea | 337.88 /ea | 2,703 |
| RC22 - Arch LED 2x2 [B] | 42.00 ea | 216.95 /ea | 9,112 |
| RC23 - Wall Washer [B] | 19.00 ea | 320.36 /ea | 6,087 |
| RC24 - Arch LED 2x4 [B] | 201.00 ea | 220.75 /ea | 44,371 |
| RC27T - Wall Washer [B] | 49.00 ea | 410.49 /ea | 20,114 |
| RC28 - Aperture Downlight [B] | 23.00 ea | 260.60 /ea | 5,994 |
| RC29 - LED Edgelit Disk [B] | 2.00 ea | 160.07 /ea | 320 |
| RC31 - LED Damp Surface 1x4 [B] | 16.00 ea | 481.65 /ea | 7,706 |
| RC56 [B] | 107.00 ea | 219.84 /ea | 23,523 |
| RC17T - downlight [B] | 45.00 ea | 411.33 /ea | 18,510 |
| RC58 [B] | 5.00 ea | 219.83 /ea | 1,099 |
| RC59 [C] | 2.00 ea | 219.84 /ea | 440 |
| RC57 [B] | 43.00 ea | 175.25 /ea | 7,536 |
| RC32 - Recessed LED 2'x2' Troffer [B] | 45.00 ea | 207.48 /ea | 9,337 |
| RC34 - Recessed LED 2'x4' Troffer [B] | 131.00 ea | 211.27 /ea | 27,676 |
| RC42 - Linear LED Wallwasher [B] | 33.00 ea | 252.99 /ea | 8,349 |
| RC44 - 4' Wall Washer [B] | 35.00 ea | 333.09 /ea | 11,658 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|------------------|------------------|
| 265000 Lighting | | | |
| RC52 - LED 2x2 [B] | 23.00 ea | 128.18 /ea | 2,948 |
| RC54 - LED 2x4 [B] | 150.00 ea | 149.99 /ea | 22,499 |
| RW02 - LED Shielded Steplight [B] | 26.00 ea | 539.96 /ea | 14,039 |
| SC18 - 96" Wraparound stair light [B] | 43.00 ea | 407.37 /ea | 17,517 |
| SC18P - 96" Wraparound stair light [B] | 13.00 ea | 414.96 /ea | 5,394 |
| SC01 - LED lighting [C] | 4.00 lf | 309.34 /lf | 1,237 |
| SC04 - LED Utility Strip [B] | 4.00 lf | 175.19 /lf | 701 |
| SW02 [C] | 2.00 ea | 546.55 /ea | 1,093 |
| SW04 - Blue Running Light Dome [B] | 162.00 ea | 282.15 /ea | 45,708 |
| SW06 - Throw Scoop [B] | 4.00 ea | 1,849.42 /ea | 7,398 |
| SW07 - Sidemount Downlight Cylinder [B] | 3.00 ea | 468.02 /ea | 1,404 |
| SW10 - Indirect Wall Bracket Can [B] | 5.00 ea | 786.84 /ea | 3,934 |
| SW11 - Wall Mounted Jelly Jar [B] | 8.00 ea | 289.77 /ea | 2,318 |
| SC03 [C] | 6.00 ea | 600.73 /ea | 3,604 |
| SC08 [C] | 146.00 lf | 220.86 /lf | 32,246 |
| SW03 - Shovelnose Egress Light [B] | 21.00 ea | 574.34 /ea | 12,061 |
| SC14 [C] | 8.00 lf | 508.32 /lf | 4,067 |
| SW06T [B] | 18.00 ea | 2,069.44 /ea | 37,250 |
| TM01 - Track Mounted Accent Light [B] | 35.00 ea | 635.06 /ea | 22,227 |
| TR01 - Surface Track [B] | 400.00 lf | 50.57 /lf | 20,228 |
| TR03 [B] | 69.00 lf | 80.30 /lf | 5,541 |
| UC01 - LED Tape [B] | 1,365.00 lf | 70.02 /lf | 95,577 |
| UC01 0-10V dimming driver [B] | 55.00 ea | 201.53 /ea | 11,084 |
| RB06 - 800LM/FT LED segmented louvered DNLT LED cove light [B] | 98.00 lf | 227.35 /lf | 22,280 |
| RB07 - 800LM/FT LED segmented louvered LED cove light [B] | 136.00 lf | 227.35 /lf | 30,920 |
| SW09 - 6500LM/FT Type IV wall mounted single fixture, 4' length [B] | 32.00 ea | 478.06 /ea | 15,298 |
| TE01: tension catenary cable with full cutoff LED [B] | 341.00 lf | 53.68 /lf | 18,305 |
| TE01: tension catenary cable drivers | 8.00 ea | 703.91 /ea | 5,631 |
| SC04 - 4' linear | 11.00 ea | 255.65 /ea | 2,812 |
| Emergency battery unit, dual head | 4.00 ea | 343.76 /ea | 1,375 |
| MC Cable (12/2) - 20A | 300.00 lf | 4.14 /lf | 1,243 |
| MC Cable (12/3) - 20A (emergency) | 18,000.00 lf | 4.07 /lf | 73,247 |
| EMT (12/2) - 20A | 75.00 lf | 8.08 /lf | 606 |
| EMT (12/3) - 20A (emergency) | 6,000.00 lf | 7.19 /lf | 43,162 |
| 265000 Lighting | | /gsf | 3,810,324 |
| 265010 Theatrical Lighting and Control | | | |
| Auditorium theatrical light fixtures & Dimming - procurement | 1.00 allw | 400,000.00 /allw | 400,000 |
| Black Box theatrical light fixtures & Dimming - procurement | 1.00 allw | 150,000.00 /allw | 150,000 |
| <i>Amphitheater theatrical light fixtures - specialty testing, connections and installation</i> | <i>0.00 allw</i> | <i>/allw</i> | |
| Auditorium theatrical light fixtures - wiring (300 man hours) | 1.00 allw | 49,840.62 /allw | 49,841 |
| Black Box theatrical light fixtures - wiring (125 man hours) | 1.00 allw | 20,699.15 /allw | 20,699 |
| <i>Amphitheater theatrical light fixtures - wiring (200 man hours)</i> | <i>0.00 allw</i> | <i>/allw</i> | |
| Auditorium theatrical light fixtures - conduit pathways | 1.00 allw | 20,660.99 /allw | 20,661 |
| Blackbox theatrical light fixtures - conduit pathways | 1.00 allw | 7,783.88 /allw | 7,784 |
| <i>Amphitheater theatrical light fixtures - conduit pathways</i> | <i>0.00 allw</i> | <i>/allw</i> | |
| Architectural control processor | 1.00 ea | 3,001.48 /ea | 3,001 |
| Box with pigtails, DMX output | 6.00 ea | 399.04 /ea | 2,394 |
| Box with pigtails, DMX output, ethernet | 47.00 ea | 411.24 /ea | 19,328 |
| Box with pigtails, DMX output, ethernet | 11.00 ea | 679.56 /ea | 7,475 |
| Box with pigtails, ethernet | 13.00 ea | 411.24 /ea | 5,346 |
| Box with receptacle, DMX output | 2.00 ea | 933.10 /ea | 1,866 |
| Box with receptacle, DMX output, ethernet | 30.00 ea | 679.56 /ea | 20,387 |
| Box with receptacle and ethernet | 17.00 ea | 411.24 /ea | 6,991 |
| Box with receptacle, DMX output, ethernet | 4.00 ea | 962.15 /ea | 3,849 |
| Control console connection | 1.00 ea | 596.48 /ea | 596 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 265010 Theatrical Lighting and Control | | | |
| Floor box control plug-in | 3.00 ea | 596.48 /ea | 1,789 |
| DMX output gateway, 8-port | 4.00 ea | 3,887.92 /ea | 15,552 |
| Entry panel | 5.00 ea | 3,980.88 /ea | 19,904 |
| Ethernet switch | 1.00 ea | 1,862.85 /ea | 1,863 |
| Floor box panel | 2.00 ea | 1,502.82 /ea | 3,006 |
| Theatrical lighting control rack | 1.00 ea | 1,604.05 /ea | 1,604 |
| A/V power panel | 2.00 ea | 3,485.92 /ea | 6,972 |
| Connector strip with pigtails, DMX output, ethernet | 4.00 ea | 679.30 /ea | 2,717 |
| Touch panel | 1.00 ea | 444.05 /ea | 444 |
| WL1 - Work light control panel | 5.00 ea | 2,589.44 /ea | 12,947 |
| WL2 - Work light control panel | 2.00 ea | 2,589.44 /ea | 5,179 |
| 265010 Theatrical Lighting and Control | | /gsf | 792,196 |
| 270001 Voice/Data/CATV | | | |
| Horizontal j-hook cable management system | 408,500.00 sf | 0.16 /sf | 66,177 |
| Ceiling backbox (1-gang) | 340.00 ea | 41.20 /ea | 14,006 |
| Wall backbox (1-gang) w/ 1" EMT above ceiling | 919.00 ea | 90.22 /ea | 82,913 |
| Plywood backboard - 3/4" w/ fire retardant paint | 135.00 lf | 79.77 /lf | 10,768 |
| Cable tray - 12"W x 4"H | 290.00 lf | 46.57 /lf | 13,504 |
| Empty conduit (EMT): 2 x 4" | 20.00 lf | 41.29 /lf | 826 |
| Empty conduit (EMT): 3 x 4" | 325.00 lf | 62.36 /lf | 20,268 |
| Empty conduit (EMT): 4 x 4" | 300.00 lf | 82.76 /lf | 24,829 |
| Empty conduit (EMT): 6 x 4" | 350.00 lf | 119.56 /lf | 41,846 |
| Copper ground bar w/isolators - 2"x1/4" | 14.00 ea | 238.90 /ea | 3,345 |
| Conduit sleeve w/ fireproofing - 4" | 116.00 ea | 172.10 /ea | 19,964 |
| Data outlet - (1) CAT-6A cable | 60.00 ea | 226.77 /ea | 13,606 |
| Telephone outlet - (1) CAT-6A cable | 170.00 ea | 226.77 /ea | 38,551 |
| Data outlet - (1) CAT-6A cable [TV] | 130.00 ea | 226.77 /ea | 29,480 |
| Data outlet - (1) CAT-6A cable [CAM] | 5.00 ea | 226.77 /ea | 1,134 |
| Data outlet - (2) CAT-6A cables | 528.00 ea | 399.59 /ea | 210,984 |
| Data outlet - (6) CAT-6A cables | 1.00 ea | 908.22 /ea | 908 |
| Data outlet - (4) CAT-6A cables | 18.00 ea | 720.33 /ea | 12,966 |
| Data outlet - (8) CAT-6A cables | 7.00 ea | 1,229.00 /ea | 8,603 |
| WAP location: (2) CAT-6A cables (WAP's by Owner) | 340.00 ea | 428.64 /ea | 145,738 |
| TV outlet - (1) RG-6 cable | 130.00 ea | 212.90 /ea | 27,677 |
| Backbone copper cable - 25 pair CAT-6 (plenum) | 2,800.00 lf | 3.26 /lf | 9,127 |
| Backbone fiber optic cable - 24 strand MM (plenum) | 2,800.00 lf | 9.05 /lf | 25,340 |
| 2-post full height rack | 25.00 ea | 701.10 /ea | 17,528 |
| 4-post full height rack | 3.00 ea | 1,005.06 /ea | 3,015 |
| Vertical cable wire manager | 41.00 ea | 269.76 /ea | 11,060 |
| Horizontal cable wire manager | 28.00 ea | 68.73 /ea | 1,925 |
| Copper patch panel: 48-port | 56.00 ea | 672.20 /ea | 37,643 |
| Fiber optic patch panel: 24-port | 28.00 ea | 487.63 /ea | 13,654 |
| Fiber optic patch panel: 24-port (for PA) | 1.00 ea | 487.63 /ea | 488 |
| Network switch - 24 port | 2.00 ea | 4,604.03 /ea | 9,208 |
| 270001 Voice/Data/CATV | | /gsf | 917,081 |
| 275000 Public Address | | | |
| Ceiling backbox (1-gang) | 132.00 ea | 50.86 /ea | 6,713 |
| Volume control | 75.00 ea | 151.61 /ea | 11,370 |
| Power supply (24) units - speakers 24V DC | 6.00 ea | 1,609.88 /ea | 9,659 |
| Battery back up system | 1.00 ea | 213.82 /ea | 214 |
| Surface mounted loudspeakers | 8.00 ea | 756.18 /ea | 6,049 |
| Ceiling mounted speakers - JBL control 26CT speakers | 119.00 ea | 471.02 /ea | 56,051 |
| Ceiling mounted speakers - JBL control 47HC | 5.00 ea | 669.83 /ea | 3,349 |
| Passive-flush in-ceiling subwoofers | 2.00 ea | 1,549.88 /ea | 3,100 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 275000 Public Address | | | |
| Equipment rack | 1.00 ea | 457.41 /ea | 457 |
| PA console | 1.00 ea | 15,149.76 /ea | 15,150 |
| Page control - 24 zones | 2.00 ea | 3,039.52 /ea | 6,079 |
| Public address wiring (EMT) | 2,500.00 lf | 7.44 /lf | 18,589 |
| Speaker wiring (plenum) | 27,200.00 lf | 3.05 /lf | 82,881 |
| Public address wiring (plenum) | 10,050.00 lf | 2.60 /lf | 26,124 |
| PA equipment power connection - 120V | 3.00 ea | 269.94 /ea | 810 |
| Public address system testing | 1.00 ea | 2,089.07 /ea | 2,089 |
| 275000 Public Address | | /gsf | 248,686 |
| 275119 Video Intercom | | | |
| Intercom sub-station | 6.00 ea | 1,512.34 /ea | 9,074 |
| Arch Control Processor | 1.00 ea | 4,664.24 /ea | 4,664 |
| Intercom master-station | 5.00 ea | 5,853.90 /ea | 29,270 |
| Intercom wiring (EMT) | 1,500.00 lf | 10.46 /lf | 15,695 |
| 275119 Video Intercom | | /gsf | 58,703 |
| 275126 Assistive Listening | | | |
| Speech amplification ceiling speakers | 524.00 ea | 190.47 /ea | 99,804 |
| Speech amplification system control panel | 131.00 ea | 689.64 /ea | 90,342 |
| Speech amplification system wireless receiver | 131.00 ea | 405.04 /ea | 53,060 |
| Speech amplification system power amplifier | 131.00 ea | 672.74 /ea | 88,128 |
| Speaker wiring (plenum) | 15,720.00 lf | 1.95 /lf | 30,666 |
| <i>Reconciliation adjustment to \$362,000 total value</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| 275126 Assistive Listening | | /gsf | 362,000 |
| 275129 Emergency Communication / Area of Rescue | | | |
| Area of rescue assistance stations | 20.00 loc | 3,000.00 /loc | 60,000 |
| 275129 Emergency Communication / Area of Rescue | | /gsf | 60,000 |
| 275300 Master Clock System | | | |
| Exterior building mounted clock - allowance (ea.) | 1.00 ls | 50,000.00 /ls | 50,000 |
| Single face clock | 211.00 ea | 293.46 /ea | 61,921 |
| Master clock | 1.00 ea | 4,012.35 /ea | 4,012 |
| Signal generator | 1.00 ea | 3,284.26 /ea | 3,284 |
| Control board | 1.00 ea | 843.23 /ea | 843 |
| Clock back box w/ receptacle | 211.00 ea | 213.58 /ea | 45,066 |
| Clock wiring (plenum) | 15,825.00 lf | 3.43 /lf | 54,342 |
| Master clock programming and testing | 1.00 ls | 9,098.80 /ls | 9,099 |
| 275300 Master Clock System | | /gsf | 228,567 |
| 281000 Integrated Security System | | | |
| High/low temperature sensors (Allowance) | 408,500.00 sf | 0.10 /sf | 40,850 |
| On-floor water sensor and processor (Allowance) | 408,500.00 sf | 0.10 /sf | 40,850 |
| Backboxes, conduits, and 120V power for access control / intrusion | 408,500.00 sf | 0.30 /sf | 122,501 |
| Card reader | 27.00 ea | 921.00 /ea | 24,867 |
| Magnetic switch | 40.00 ea | 322.60 /ea | 12,904 |
| Electric latch retraction panic hardware | 58.00 ea | 322.60 /ea | 18,711 |
| Magnetic lock - single door | 2.00 ea | 714.60 /ea | 1,429 |
| Electric strike | 1.00 ea | 439.66 /ea | 440 |
| Door release button / push to exit | 21.00 ea | 221.25 /ea | 4,646 |
| 24V power supply | 17.00 ea | 321.30 /ea | 5,462 |
| 24V power supply - video intercom | 1.00 ea | 321.30 /ea | 321 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 281000 Integrated Security System | | | |
| Junction box - 6"x6"x4" | 21.00 ea | 146.30 /ea | 3,072 |
| Electric Trim | 12.00 ea | 411.89 /ea | 4,943 |
| Digital keypad | 4.00 ea | 1,071.73 /ea | 4,287 |
| Ultrasonic motion detector | 52.00 ea | 659.55 /ea | 34,297 |
| Curtain motion detector | 14.00 ea | 659.55 /ea | 9,234 |
| Security siren | 1.00 ea | 397.60 /ea | 398 |
| Door release button | 3.00 ea | 322.43 /ea | 967 |
| Local door alarm | 4.00 ea | 472.43 /ea | 1,890 |
| Access control / intrusion head end panels and equipment | 1.00 ls | 64,999.99 /ls | 65,000 |
| Intrusion detection controller/communicator | 10.00 ea | 1,644.78 /ea | 16,448 |
| Security wiring (EMT) | 6,500.00 lf | 9.71 /lf | 63,142 |
| Empty Conduit (EMT): 3/4" | 1,800.00 lf | 5.74 /lf | 10,326 |
| Power junction - 120V/20A | 20.00 ea | 215.82 /ea | 4,316 |
| Access control system programming & testing | 1.00 ea | 11,952.00 /ea | 11,952 |
| 281000 Integrated Security System | | /gsf | 503,252 |
| 281010 Shooting Detection Sensors | | | |
| Shooting detection sensor | 95.00 ea | 2,000.00 /ea | 190,000 |
| 281010 Shooting Detection Sensors | | /gsf | 190,000 |
| 282000 Video Surveillance | | | |
| Backboxes, conduits, and 120V power for video surveillance | 408,500.00 sf | 0.15 /sf | 61,275 |
| Fixed interior camera - 180 deg | 9.00 ea | 964.78 /ea | 8,683 |
| Fixed interior camera - 360 deg | 52.00 ea | 1,139.78 /ea | 59,269 |
| Fixed interior camera | 56.00 ea | 1,178.25 /ea | 65,982 |
| Network recorder | 1.00 ea | 3,390.40 /ea | 3,390 |
| Network switcher | 1.00 ea | 2,167.80 /ea | 2,168 |
| Video surveillance cable (plenum) | 13,700.00 lf | 4.56 /lf | 62,489 |
| Video surveillance head end monitors, controllers, equipment | 1.00 ls | 47,500.05 /ls | 47,500 |
| Video surveillance system software & licensing | 1.00 ea | 4,390.40 /ea | 4,390 |
| Video surveillance system programming & testing | 1.00 ea | 5,652.00 /ea | 5,652 |
| 282000 Video Surveillance | | /gsf | 320,798 |
| 284620 Fire Detection and Alarm | | | |
| Wire elevator status panel | 1.00 ea | 850.68 /ea | 851 |
| Manual pull station | 85.00 ea | 198.56 /ea | 16,877 |
| Add for weatherproofing | 4.00 ea | 95.09 /ea | 380 |
| Manual pull station | 1.00 ea | 198.57 /ea | 199 |
| Smoke detector | 327.00 ea | 217.83 /ea | 71,231 |
| Smoke detector | 1.00 ea | 217.85 /ea | 218 |
| Heat detector | 4.00 ea | 217.85 /ea | 871 |
| Carbon monoxide detector (w/ monitor module) | 36.00 ea | 364.50 /ea | 13,122 |
| Duct smoke detectors (furnish & wire) | 21.00 ea | 817.64 /ea | 17,170 |
| Remote indicating light | 51.00 ea | 132.26 /ea | 6,745 |
| Remote indicating light | 1.00 ea | 132.27 /ea | 132 |
| Control module | 51.00 ea | 260.93 /ea | 13,308 |
| Addressable monitor module | 11.00 ea | 159.15 /ea | 1,751 |
| Addressable monitor module | 2.00 ea | 167.56 /ea | 335 |
| Addressable relay module | 4.00 ea | 225.15 /ea | 901 |
| Tamper switch connection (via monitor module) | 23.00 ea | 588.85 /ea | 13,544 |
| Flow switch connection (via monitor module) | 23.00 ea | 424.68 /ea | 9,768 |
| Flow switch connection (via monitor module) | 2.00 ea | 424.68 /ea | 849 |
| Post indicating valve connection (via monitor module) | 3.00 ea | 466.95 /ea | 1,401 |
| Pressure switch connection (via monitor module) | 2.00 ea | 466.95 /ea | 934 |
| Door hold device (magnetic) | 93.00 ea | 372.32 /ea | 34,626 |
| Wire combination fire/smoke dampers (SLC) | 55.00 ea | 629.60 /ea | 34,628 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|--------------------|-------------------|
| 284620 Fire Detection and Alarm | | | |
| Speaker only - wall | 5.00 ea | 147.13 /ea | 736 |
| Strobe only - ceiling | 215.00 ea | 177.55 /ea | 38,174 |
| Strobe only | 2.00 ea | 177.57 /ea | 355 |
| Speaker/strobe - wall | 53.00 ea | 244.21 /ea | 12,943 |
| Speaker/strobe - wall | 2.00 ea | 244.22 /ea | 488 |
| Speaker/strobe - ceiling | 509.00 ea | 244.21 /ea | 124,301 |
| Exterior beacon (weatherproof) | 4.00 ea | 388.06 /ea | 1,552 |
| Exterior beacon (weatherproof) | 1.00 ea | 388.06 /ea | 388 |
| Wire 120V sprinkler bell | 1.00 ea | 208.76 /ea | 209 |
| Fire alarm transponder panel | 15.00 ea | 2,274.68 /ea | 34,120 |
| Fire alarm network node | 1.00 ea | 918.77 /ea | 919 |
| Battery backup cabinet | 1.00 ea | 1,476.36 /ea | 1,476 |
| Battery backup cabinet | 1.00 ea | 715.68 /ea | 716 |
| Fire alarm annunciator | 2.00 ea | 6,102.72 /ea | 12,205 |
| Fire alarm graphic annunciator | 1.00 ea | 6,102.72 /ea | 6,103 |
| FACP (2-5 zone) | 1.00 ea | 1,898.99 /ea | 1,899 |
| FACP | 3.00 ea | 11,203.74 /ea | 33,611 |
| Terminal equipment | 1.00 ls | 10,756.80 /ls | 10,757 |
| Head end panels and terminal equipment | 1.00 ls | 31,499.99 /ls | 31,500 |
| Masterbox | 1.00 ea | 4,086.36 /ea | 4,086 |
| Key (Knox) box | 4.00 ea | 785.34 /ea | 3,141 |
| Fire alarm command center | 1.00 ea | 57,020.40 /ea | 57,020 |
| Fire pump/jockey pump fire alarm connection | 1.00 ea | 3,124.66 /ea | 3,125 |
| Backfeed existing fire alarm equipment from FACP in Phase 1 | 1.00 ls | 19,538.79 /ls | 19,539 |
| Tie to main FACP | 1.00 ea | 935.60 /ea | 936 |
| Tie to BMS | 1.00 ea | 985.68 /ea | 986 |
| Fire alarm system testing | 1.00 ls | 13,006.80 /ls | 13,007 |
| Fire alarm system testing | 1.00 ls | 2,401.02 /ls | 2,401 |
| Fire alarm system programming | 801.00 ea | 20.03 /ea | 16,047 |
| MC Cable (FA) - #14-4/c | 25,000.00 lf | 3.96 /lf | 98,879 |
| MC Cable (FA) - #16-2/c | 21,600.00 lf | 2.94 /lf | 63,394 |
| EMT (red) - 3/4"C w/ #16-2/c | 10,550.00 lf | 7.31 /lf | 77,075 |
| EMT (red) - 3/4"C w/ #14-4/c | 9,725.00 lf | 8.06 /lf | 78,371 |
| Circuit integrity cabling (CIC) | 2,500.00 lf | 18.72 /lf | 46,796 |
| Ductbank w/ IMSA cable - 2" PVC | 250.00 lf | 16.60 /lf | 4,150 |
| 284620 Fire Detection and Alarm | | /gsf | 1,041,245 |
| 284624 Bi-Directional Amplifier (BDA) | | | |
| Furnish controller, antennas, cabling, components (dual-frequency) | 408,500.00 sf | 0.40 /sf | 163,400 |
| Installation of BDA system | 408,500.00 sf | 0.07 /sf | 30,311 |
| Minor material for BDA system | 408,500.00 sf | 0.15 /sf | 61,275 |
| 284624 Bi-Directional Amplifier (BDA) | | /gsf | 254,986 |
| D50 Electrical | 408,500.00 gsf | 47.57 /gsf | 19,433,600 |
| D50 Electrical Systems | 408,500.00 gsf | 47.57 /gsf | 19,433,600 |
| D Services | 408,500.00 gsf | 139.51 /gsf | 56,987,920 |

E Equipment & Furnishings**E10 Equipment**



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|----------------|
| E10 Equipment General | | | |
| 110610 Theatrical Equipment | | | |
| Theater rigging and curtains per quote from High Output | 1.00 ls | 500,693.00 /ls | 500,693 |
| Retractable acoustic panels on stage | 1.00 ls | 138,520.00 /ls | 138,520 |
| 110610 Theatrical Equipment | | /gsf | 639,213 |
| 110680 Portable Platforms and Seating | | | |
| Stage extension - per quote from Walker | 1.00 ls | 129,920.00 /ls | 129,920 |
| <i>Portable platform at black box</i> | <i>0.00 ls</i> | <i>0.00 /ls</i> | <i>0</i> |
| 110680 Portable Platforms and Seating | 434,320.00 gsf | 0.30 /gsf | 129,920 |
| 111300 Loading Dock Equipment | | | |
| Loading dock eqp | 1.00 ls | 5,000.00 /ls | 5,000 |
| 111300 Loading Dock Equipment | | /ls | 5,000 |
| 114000 Food Service Equipment | | | |
| 1 - Walk-in cooler/freezer | 1.00 ea | 91,505.07 /ea | 91,505 |
| 6 - Mobile walk-in shelving | 16.00 ea | 491.73 /ea | 7,868 |
| 7 - Mobile walk-in shelving | 3.00 ea | 470.64 /ea | 1,412 |
| 8 - Mobile walk-in shelving | 4.00 ea | 543.90 /ea | 2,176 |
| 9 - Mobile dry storage shelving | 14.00 ea | 491.73 /ea | 6,884 |
| 11 - Mobile dry storage shelving | 1.00 ea | 470.64 /ea | 471 |
| 12 - Soiled dishtable w/sink | 1.00 ea | 2,989.23 /ea | 2,989 |
| Disposer/controls | 1.00 ea | 8,218.44 /ea | 8,218 |
| 13 - Waste bin | 6.00 ea | 600.00 /ea | 3,600 |
| 14 - Dishmachine | 1.00 ea | 29,382.81 /ea | 29,383 |
| 15 - 3 Bay pot sink | 1.00 ea | 7,035.18 /ea | 7,035 |
| 16 - Wall shelf w/ pot hooks | 1.00 ea | 1,215.45 /ea | 1,215 |
| 17 - Hand sink | 1.00 ea | 1,148.85 /ea | 1,149 |
| 18 - Mobile pot shelving | 2.00 ea | 491.73 /ea | 983 |
| 19 - Mobile pot shelving | 1.00 ea | 543.90 /ea | 544 |
| 21 - Dry storage shelving | 4.00 ea | 543.90 /ea | 2,176 |
| 23 - Reach in refrigerator | 1.00 ea | 5,354.64 /ea | 5,355 |
| 24 - Work table w/ overshelf | 1.00 ea | 4,548.78 /ea | 4,549 |
| 25 - Food processor | 1.00 ea | 4,860.69 /ea | 4,861 |
| 26 - Work table with sink | 1.00 ea | 4,711.95 /ea | 4,712 |
| 27 - Work table w/ overshelf | 1.00 ea | 4,548.78 /ea | 4,549 |
| 28 - Food slicer | 1.00 ea | 4,408.92 /ea | 4,409 |
| 30 - Reach in heated cabinet | 1.00 ea | 5,132.64 /ea | 5,133 |
| 31 - Work table with hand sink | 1.00 ea | 4,711.95 /ea | 4,712 |
| 34F -6 Burner range with oven | 1.00 ea | 8,019.75 /ea | 8,020 |
| 35 - 40 gal tilting kettle | 1.00 ea | 20,861.34 /ea | 20,861 |
| 36 - Floor trough | 1.00 ea | 2,555.22 /ea | 2,555 |
| 37 - 30 gal tilting skillet | 1.00 ea | 18,420.45 /ea | 18,420 |
| 38 - Floor trough | 1.00 ea | 2,555.22 /ea | 2,555 |
| 39 -Convection steamer | 1.00 ea | 20,699.28 /ea | 20,699 |
| 40 - Exhaust hoods | 1.00 ea | 39,684.72 /ea | 39,685 |
| 41 - Fire suppression system | 1.00 ea | 8,151.84 /ea | 8,152 |
| 43 - Demand controls | 1.00 ea | 5,975.13 /ea | 5,975 |
| 44 - Conveyor pizza oven | 1.00 ea | 12,753.90 /ea | 12,754 |
| 45 - Double convectoin oven | 1.00 ea | 17,772.21 /ea | 17,772 |
| 46 - Double convection oven | 1.00 ea | 19,075.35 /ea | 19,075 |
| 47 - Work table w/ handsink & overshelf | 1.00 ea | 7,001.88 /ea | 7,002 |
| 49 - Reach in heated cabinet | 1.00 ea | 5,132.64 /ea | 5,133 |
| 50 - Prep table w/ sinks | 1.00 ea | 5,148.18 /ea | 5,148 |
| 51 - Pan rack cart | 4.00 ea | 459.54 /ea | 1,838 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 114000 Food Service Equipment | | | |
| 52 - Work table w/ handsink and overshef | 1.00 ea | 4,064.82 /ea | 4,065 |
| 54 - Reach in refrigerator | 1.00 ea | 4,982.79 /ea | 4,983 |
| 55- Prep table w/ sinks & overshef | 1.00 ea | 5,929.62 /ea | 5,930 |
| 56 - Mobile dry storage shelving | 3.00 ea | 491.73 /ea | 1,475 |
| 59 - Hand sink | 1.00 ea | 1,148.85 /ea | 1,149 |
| 62 - Service counter | 1.00 ea | 80,857.95 /ea | 80,858 |
| reduce pricing on counter | (1.00) ea | 42,295.00 /ea | (42,295) |
| 63 - Heated shelf food warmer | 1.00 ea | 1,060.05 /ea | 1,060 |
| 63A - sneeze guard w/ light & heat | 1.00 ea | 6,269.28 /ea | 6,269 |
| 64 - Heated shelf food warmer | 1.00 ea | 1,060.05 /ea | 1,060 |
| 64A - Sneeze guard w/ light & heat | 1.00 ea | 6,269.28 /ea | 6,269 |
| 65 - Folding cutting board | 3.00 ea | 183.15 /ea | 549 |
| 66 -Hot food wells | 1.00 ea | 23,734.02 /ea | 23,734 |
| 66A - Sneeze guard w/ light & heat | 1.00 ea | 9,920.07 /ea | 9,920 |
| 67 - Folding cutting board | 3.00 ea | 183.15 /ea | 549 |
| 68 - Hot food wells | 1.00 ea | 23,734.02 /ea | 23,734 |
| 68A - Sneeze guard w/ light & heat | 1.00 ea | 9,920.07 /ea | 9,920 |
| 69F -Refrigerated merchandiser | 1.00 ea | 10,225.32 /ea | 10,225 |
| 70F - Refrigerated mechandiser | 1.00 ea | 10,225.32 /ea | 10,225 |
| 71 - Folding cutting board | 3.00 ea | 183.15 /ea | 549 |
| 72 - Cold food wells | 1.00 ea | 23,734.02 /ea | 23,734 |
| 72A - Sneeze guard w/ light | 1.00 ea | 7,532.46 /ea | 7,532 |
| 73 - Cold food wells | 1.00 ea | 23,734.02 /ea | 23,734 |
| 73A - Sneeze guard w/ light | 1.00 ea | 7,532.46 /ea | 7,532 |
| 74 - Open display merchandiser | 3.00 ea | 10,225.32 /ea | 30,676 |
| 75 - Refrigerated merchandiser | 1.00 ea | 10,225.32 /ea | 10,225 |
| 76 - Refrigerated mechandiser | 1.00 ea | 10,225.32 /ea | 10,225 |
| 77 - Cashier counter | 1.00 ea | 6,683.31 /ea | 6,683 |
| 80 - Milk cooler | 1.00 ea | 3,222.33 /ea | 3,222 |
| 81 - Cashier counter | 1.00 ea | 6,683.31 /ea | 6,683 |
| 84 - Milk cooler | 1.00 ea | 225.33 /ea | 225 |
| 85 - Cashier counter | 1.00 ea | 5,891.88 /ea | 5,892 |
| 88 - Milk cooler | 1.00 ea | 2,720.61 /ea | 2,721 |
| Eqp bought with phase 2, used in phase 3 (2 ovens and 1 range) | 1.00 ls | 50,000.00 /ls | 50,000 |
| 114000 Food Service Equipment | | /gsf | 750,848 |
| 114500 Residential Appliances | | | |
| Full size fridge - REF-1, -1A, 2 (prev 21ea) | 17.00 ea | 1,600.00 /ea | 27,200 |
| UC fridge - REF-4 (prev 16ea) | 19.00 ea | 1,000.00 /ea | 19,000 |
| Full size freezer - FRE-1, -2 (prev 2ea) | 3.00 ea | 2,000.00 /ea | 6,000 |
| <i>UC freezer (prev 1ea) none shown</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| Microwave - MW-1 (prev 32ea) | 25.00 ea | 500.00 /ea | 12,500 |
| Washer - W-1 (prev 5ea) | 4.00 ea | 1,500.00 /ea | 6,000 |
| Dryer - D-1 (prev 5ea) | 4.00 ea | 1,500.00 /ea | 6,000 |
| Dishwasher - DW-1 (prev 12ea) | 6.00 ea | 1,000.00 /ea | 6,000 |
| Wall oven - CS-3 (prev 6ea) | 7.00 ea | 1,000.00 /ea | 7,000 |
| Cookstove - CS-1, -2 (prev 10ea) | 13.00 ea | 1,500.00 /ea | 19,500 |
| Exhaust hood - EH-1, -2 | 13.00 ea | 500.00 /ea | 6,500 |
| ADA cooktop - CS-4 (prev 8ea) | 4.00 ea | 1,500.00 /ea | 6,000 |
| Ice machine - IM-1 | 1.00 ea | 4,000.00 /ea | 4,000 |
| Undercounter ice machine - IM-2 (prev 2ea) | 11.00 ea | 1,500.00 /ea | 16,500 |
| Cook stop (prev 10ea) | 13.00 ea | 1,500.00 /ea | 19,500 |
| 114500 Residential Appliances | | /gsf | 161,700 |
| 116620 Athletic Equipment - Gym | | | |
| Basketball backstop - ceiling-hung - retractable glass | 7.00 ea | 8,316.00 /ea | 58,212 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|------------------|
| 116620 Athletic Equipment - Gym | | | |
| Gym divider curtain (gym) - electric roll up 102' x 30'h | 3,060.00 sf | 8.00 /sf | 24,480 |
| Wall padding | 2,496.00 sf | 18.50 /sf | 46,176 |
| Volleyball Equipment (floor sleeves) | 2.00 ls | 1,100.00 /ls | 2,200 |
| Wrestling mat mover | 2.00 ls | 23,100.00 /ls | 46,200 |
| <i>Wrestling mat 42'x42' - supplied by Owner</i> | <i>0.00 ls</i> | <i>0.00 /ls</i> | <i>0</i> |
| Rock Climbing Wall (1 ea) | 1.00 ls | 159,500.00 /ls | 159,500 |
| <i>Climbing rope & hoist</i> | <i>0.00 ls</i> | <i>0.00 /ls</i> | <i>0</i> |
| Score Boards (2 ea) & Shot clocks (6 ea) - gym only | 1.00 ls | 35,000.00 /ls | 35,000 |
| | | /gsf | 371,768 |
| 117010 Vocational Equipment | | | |
| <i>Allowance for vocational and technology eqp</i> | <i>0.00 allw</i> | <i>0.00 /allw</i> | <i>0</i> |
| Kiln | 1.00 ea | 5,000.00 /ea | 5,000 |
| | | /gsf | 5,000 |
| 123000 Manufactured Casework | | | |
| Pass thru fume hoods | 7.00 ea | 32,500.00 /ea | 227,500 |
| | | /gsf | 227,500 |
| 126100 Fixed Audience Seating | | | |
| Fixed audience seating - auditorium - based on quote from CBS | 736.00 ea | 382.00 /ea | 281,152 |
| Fixed audience seating - auditorium - loose chair | 76.00 ea | 180.00 /ea | 13,680 |
| Fixed audience seating - debate lab - based on quote from CBS | 120.00 ea | 382.00 /ea | 45,840 |
| | | /gsf | 340,672 |
| 126600 Telescoping Stands | | | |
| Retractable Bleachers at gym (seat number is gross) | 2,560.00 seat | 139.00 /seat | 355,840 |
| | | /gsf | 355,840 |
| E10 Equipment General | 408,500.00 gsf | 7.31 /gsf | 2,987,461 |
| E10 Equipment | 408,500.00 gsf | 7.31 /gsf | 2,987,461 |
| E20 Furnishings | | | |
| E2010 Fixed Furnishings | | | |
| 122400 Window Shades | | | |
| Ext Sngl roller shade assemblies per shade drawing (409 ea) | 18,240.00 sf | 10.00 /sf | 182,400 |
| Ext Dbl roller shade assemblies per shade drawing (17 ea) | 1,170.00 sf | 20.00 /sf | 23,400 |
| Motorized shades - room darkening (9 ea) | 1,561.00 sf | 15.00 /sf | 23,415 |
| Motorized shades - blackout (7 ea) | 384.00 sf | 20.00 /sf | 7,680 |
| add for motors (no wider than 10') | 24.00 ea | 1,100.00 /ea | 26,400 |
| Interior shades at language lab, smart center, committee rm | 16.00 ea | 350.00 /ea | 5,600 |
| Interior blinds at all borrowed lights per note B A9.4 | 6,000.00 sf | 10.00 /sf | 60,000 |
| Motorized shade a 5th floor interior D-lab - rm darkening - 70' | 420.00 sf | 15.00 /sf | 6,300 |
| add for motors (no wider than 10') at D-lab | 8.00 ea | 1,100.00 /ea | 8,800 |
| Interior blinds at door types B,E,F | 325.00 ea | 75.00 /ea | 24,375 |
| | | /gsf | 368,370 |
| 123000 Manufactured Casework | | | |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|-----------------|--------------|
| 123000 Manufactured Casework | | | |
| Bookcases (6 ea) | 18.00 lf | 166.41 /lf | 2,995 |
| <i>Built-in desk at daycare</i> | <i>33.00 lf</i> | <i>/lf</i> | |
| <i>Preschool lockers/cubbies</i> | <i>0.00 lf</i> | <i>/lf</i> | |
| Base cabinet - type ADA3633 (prev 291lf) | 248.00 lf | 221.43 /lf | 54,915 |
| Base cabinet - type B02633 | 4.00 lf | 221.43 /lf | 886 |
| Base cabinet - type B03033 (prev 5lf) | 10.00 lf | 221.43 /lf | 2,214 |
| Base cabinet - type B03433 | 3.00 lf | 221.43 /lf | 664 |
| Base cabinet - type B03633 (prev 15lf) | 18.00 lf | 221.43 /lf | 3,986 |
| Base cabinet - type B11833 (prev 9lf) | 17.00 lf | 221.43 /lf | 3,764 |
| Base cabinet - type B12233 | 4.00 lf | 221.44 /lf | 886 |
| Base cabinet - type B12433 | 44.00 lf | 221.43 /lf | 9,743 |
| Base cabinet - type B12833 | 2.33 lf | 221.43 /lf | 516 |
| Base cabinet - type B13033 | 707.50 lf | 221.43 /lf | 156,662 |
| Base cabinet - type B13233 (prev 5lf) | 16.00 lf | 221.42 /lf | 3,543 |
| Base cabinet - type B13433 | 2.83 lf | 221.43 /lf | 627 |
| Base cabinet - type B13633 (prev 459lf) | 400.00 lf | 221.43 /lf | 88,572 |
| Base cabinet - type B14233 | 4.00 lf | 221.43 /lf | 886 |
| Base cabinet - type BP3033 | 20.00 lf | 221.43 /lf | 4,429 |
| Base cabinet - type BS3633 (prev 159lf) | 165.00 lf | 221.43 /lf | 36,536 |
| Countertop epoxy resin at science and prep rooms (prev 963lf) | 1,048.00 lf | 131.52 /lf | 137,833 |
| Countertop solid surface (prev 985lf) | 883.00 lf | 201.30 /lf | 177,748 |
| Hat shelf - H3012A | 10.00 lf | 40.26 /lf | 403 |
| Hat shelf - H3312A | 5.50 lf | 40.26 /lf | 221 |
| Hat shelf - H3612A | 15.00 lf | 40.26 /lf | 604 |
| Hat shelf - H3612S | 15.00 lf | 40.26 /lf | 604 |
| Storage music - M-S06 (12ea) | 24.00 lf | 570.35 /lf | 13,688 |
| Storage music - M01G (1ea) (prev 4lf) | 2.00 lf | 469.71 /lf | 939 |
| Storage music - M02G (1ea) | 2.00 lf | 469.69 /lf | 939 |
| Storage music - M04G (5ea) | 10.00 lf | 469.70 /lf | 4,697 |
| Storage music - M05G (10ea) | 20.00 lf | 469.70 /lf | 9,394 |
| Storage music - M11G (2ea) | 4.00 lf | 469.70 /lf | 1,879 |
| Storage music - M18G (1ea) | 2.50 lf | 469.70 /lf | 1,174 |
| Storage music - M43G (2ea) | 4.00 lf | 469.70 /lf | 1,879 |
| Mail slots - M3648 | 12.00 lf | 469.70 /lf | 5,636 |
| Mail slots - M6024 | 5.00 lf | 469.70 /lf | 2,349 |
| Tall wall oven cabinet - TO2726 | 15.75 lf | 402.60 /lf | 6,341 |
| Tall storage - TS3030 | 180.00 lf | 348.92 /lf | 62,806 |
| <i>Tall storage - TS3624 (prev 12lf) none shown</i> | <i>0.00 lf</i> | <i>/lf</i> | |
| Tall storage - TS3626 (prev 108lf) | 92.00 lf | 348.92 /lf | 32,101 |
| Tall storage - TS3626M | 45.00 lf | 348.92 /lf | 15,701 |
| Tall storage - TS3630L (prev 216lf) | 292.00 lf | 348.92 /lf | 101,885 |
| Tall storage - TS3631 (prev 24lf) | 33.00 lf | 348.92 /lf | 11,514 |
| Tall storage - TS3631D (prev 9lf) | 14.00 lf | 348.93 /lf | 4,885 |
| Tall storage - TT3631 (prev 3lf) | 6.00 lf | 348.93 /lf | 2,094 |
| Tall storage - TW3624 (prev 6lf) | 24.00 lf | 348.93 /lf | 8,374 |
| Tall storage - TW3626 (prev 48lf) | 56.00 lf | 348.92 /lf | 19,540 |
| Tall storage - TW3630 (prev 222lf) | 178.00 lf | 348.92 /lf | 62,108 |
| Tall storage - untagged | 7.00 lf | 348.92 /lf | 2,442 |
| Wall cabinet - W2030 | 2.00 lf | 208.00 /lf | 416 |
| Wall cabinet - W2230 | 4.00 lf | 208.00 /lf | 832 |
| Wall cabinet - W2424 | 12.00 lf | 208.00 /lf | 2,496 |
| Wall cabinet - W2430 (prev 114lf) | 74.00 lf | 208.00 /lf | 15,392 |
| Wall cabinet - W3018 (prev 20lf) | 26.00 lf | 208.00 /lf | 5,408 |
| Wall cabinet - W3024 (prev 25 lf) | 22.00 lf | 208.00 /lf | 4,576 |
| Wall cabinet - W3030 (prev 680lf) | 704.00 lf | 208.00 /lf | 146,432 |
| Wall cabinet - W3230 (prev 3lf) | 27.00 lf | 208.01 /lf | 5,616 |
| Wall cabinet - W3618 (prev 18lf) | 15.00 lf | 208.00 /lf | 3,120 |
| Wall cabinet - W3624 (prev 408lf) | 403.00 lf | 208.00 /lf | 83,824 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|------------------|
| 123000 Manufactured Casework | | | |
| Wall cabinet - W3630 (prev 483lf) | 454.00 lf | 208.00 /lf | 94,432 |
| Wall cabinet - W4230 (prev 39lf) | 3.00 lf | 208.00 /lf | 624 |
| Wall cabinet - W4430 | 18.00 lf | 208.00 /lf | 3,744 |
| Wall cabinet - WG3624 | 7.00 lf | 208.00 /lf | 1,456 |
| Science sinks, faucet only | 77.00 ea | 530.09 /ea | 40,817 |
| Classroom sinks | 67.00 ea | 1,061.52 /ea | 71,122 |
| <i>Laborer for trade support - Mfg Casework</i> | <i>wks</i> | <i>/wks</i> | |
| 123000 Manufactured Casework | | /gsf | 1,541,907 |
| 124810 Entrance Floor Mats and Frames | | | |
| EM1 - entrance mat type 1, forbo carpet | 182.00 sf | 15.00 /sf | 2,730 |
| EM2 - entrance mat type 2, forbo carpet | 1,328.00 sf | 15.00 /sf | 19,920 |
| EM3 - entrance mat type 3, forbo carpet | 2,631.00 sf | 15.00 /sf | 39,465 |
| 124810 Entrance Floor Mats and Frames | | /sf | 62,115 |
| E2010 Fixed Furnishings | 408,500.00 gsf | 4.83 /gsf | 1,972,392 |
| E20 Furnishings | 408,500.00 gsf | 4.83 /gsf | 1,972,392 |
| E Equipment & Furnishings | 408,500.00 gsf | 12.14 /gsf | 4,959,853 |
| F Special Construction & Demolition | | | |
| F10 Special Construction | | | |
| F10 Temporary Construction | | | |
| 015060 Temporary Enclosures | | | |
| Temp exterior/interior enclosure end of phase 1 (130'x18'+130'x14'+60'x14'+20'x15') | 5,140.00 sf | 28.00 /sf | 143,920 |
| Temp exterior only enclosure end of phase 1 (20'x18' + 36'x14' + 65'x14' +20'x15') | 1,774.00 sf | 20.00 /sf | 35,480 |
| Temp exterior/interior enclosure end of phase 2 (140'x56') | 7,840.00 sf | 28.00 /sf | 219,520 |
| Temp exterior only enclosure end of phase 2 (70'x56') | 3,920.00 sf | 20.00 /sf | 78,400 |
| 015060 Temporary Enclosures | | /gsf | 477,320 |
| 015070 Temporary Construction | | | |
| Temp enclosed stairs from GF to level 2 | 2.00 fl | 75,000.00 /fl | 150,000 |
| Temporary construction for safe egress | 1.00 allw | 75,000.00 /allw | 75,000 |
| Temporary modifications to existing to allow for separation | 1.00 ls | 100,000.00 /ls | 100,000 |
| Temporary pedestrian protection & access - phase 2,3 | 1.00 ls | 220,000.00 /ls | 220,000 |
| Allowance for selective demo and grading for temporary protection | 1.00 ls | 50,000.00 /ls | 50,000 |
| Staging/pedestrian overhead protection - phase 1 | 1.00 ls | 190,000.00 /ls | 190,000 |
| 015070 Temporary Construction | | /gsf | 785,000 |
| 015075 Bridge Connection (A1.2.4) | | | |
| Seclective demo | 1,600.00 gsf | 12.00 /gsf | 19,200 |
| Railings | 135.00 lf | 180.00 /lf | 24,300 |
| Ramp, platform and rails per quaoate from Amramp | 660.00 sf | 67.56 /sf | 44,590 |
| Drywall, ceilings, flooring, painting | 1,600.00 sf | 45.00 /sf | 72,000 |
| HVAC | 1,600.00 gsf | 15.00 /gsf | 24,000 |
| Electrical | 1,600.00 gsf | 24.00 /gsf | 38,400 |
| New bridge building complete | 1,100.00 gsf | 200.00 /gsf | 220,000 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|------------------|
| 015075 Bridge Connection (A1.2.4) | | | 442,489 |
| 015080 Swing Spacing | | | |
| 3rd floor temp library | 4,605.00 gsf | 20.00 /gsf | 92,100 |
| 2nd floor ada lift and modifications to ramp (all but HVAC) | 1.00 ls | 100,000.00 /ls | 100,000 |
| 2nd floor temp kitchen, minor plumbing, health dept improv (all but HVAC) | 7,000.00 gsf | 17.00 /gsf | 119,000 |
| 3rd floor LABB program, new quite room (all but HVAC) | 2,400.00 gsf | 50.00 /gsf | 120,000 |
| 3rd floor LABB program, nurse suite, kitchenette (all but HVAC) | 1.00 ls | 100,000.00 /ls | 100,000 |
| 4th floor sped office/science center, fire alarm, hvac, drywall (all but HVAC) | 1.00 ls | 50,000.00 /ls | 50,000 |
| A1.2.3 - modifications at corner of Fusco incl walls, toilet demo (all but HVAC) | 1.00 ls | 100,000.00 /ls | 100,000 |
| 015080 Swing Spacing | | /gsf | 681,100 |
| 015083 CR 17 - Cooling at Existing Building | | | |
| Temp cooling of existing building | 1.00 ls | 106,000.00 /ls | 106,000 |
| 015083 CR 17 - Cooling at Existing Building | | | 106,000 |
| 040130 Historic Salvage & Reuse | | | |
| Fusco stone entry facade (2/A12.8.0b) x | 1.00 ls | 210,000.00 /ls | 210,000 |
| Investigation associated with historic salvage (per approved OAL) | 1.00 ls | 75,000.00 /ls | 75,000 |
| 040130 Historic Salvage & Reuse | | /gsf | 285,000 |
| 069999 Historic Salvaged (except Stone Facade) | | | |
| Clock mechanism at tower - salvage and turn over to Owner x | 1.00 ls | 15,000.00 /ls | 15,000 |
| Old Hall proscenium and return to owner x | 1.00 ls | 10,000.00 /ls | 10,000 |
| Remove and reinstall carved frieze for Fusco old hall x | 1.00 ls | 4,000.00 /ls | 4,000 |
| River of Hands Mosaic - 60' long - salvage and relocated to 3rd floor corridor | 1.00 ls | 25,000.00 /ls | 25,000 |
| Carved wood panel frm Fusco entry stair, remounted at auditorium entry | 1.00 ls | 15,000.00 /ls | 15,000 |
| 069999 Historic Salvaged (except Stone Facade) | | | 69,000 |
| 312000 Earth Work | | | |
| Additional earth moving at interim all other phases (incl paving as required) | 1.00 al | 100,000.00 /al | 100,000 |
| 312000 Earth Work | | /gsf | 100,000 |
| F10 Temporary Construction | | /gsf | 2,945,910 |
| F10 EB#3 Summer 2020 Swing Space EBP#3 | | | |
| 015082 EBP #3 - Summer 2020 Work | | | |
| Selective demolition - Costello | 1.00 ls | 40,370.00 /ls | 40,370 |
| Paint - Color Concepts | 1.00 ls | 37,800.00 /ls | 37,800 |
| Abatement - Costello | 1.00 ls | 12,130.00 /ls | 12,130 |
| Concrete and bollard | 1.00 ls | 18,100.00 /ls | 18,100 |
| Plumbing - Robert Irvine | 1.00 ls | 48,880.00 /ls | 48,880 |
| HVAC - CAM HVAC | 1.00 ls | 167,000.00 /ls | 167,000 |
| Electrical - WJ Griffin | 1.00 ls | 194,890.00 /ls | 194,890 |
| Carpenter - Padco/Riggs | 1.00 ls | 12,760.00 /ls | 12,760 |
| D/F/H - Horner, Riggs | 1.00 ls | 34,260.00 /ls | 34,260 |
| Glass - A&A | 1.00 ls | 9,000.00 /ls | 9,000 |
| Drywall - TJ McCartney | 1.00 ls | 79,100.00 /ls | 79,100 |
| Acoustical ceilings | 1.00 ls | 2,700.00 /ls | 2,700 |
| Flooring & Tile - Ayotte & King | 1.00 ls | 33,990.00 /ls | 33,990 |
| Specialties - Automation | 1.00 ls | 29,308.00 /ls | 29,308 |
| GRs | 1.00 ls | 125,000.00 /ls | 125,000 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|-------------------|
| 015082 EBP #3 - Summer 2020 Work | | | 845,288 |
| F10 EB#3 Summer 2020 Swing Space EBP#3 | | | 845,288 |
| F10 Special Construction | | /gsf | 3,791,198 |
| F20 Existing Building Demolition | | | |
| F2010 Building Elements Demolition | | | |
| 024119 Demolition | | | |
| Building demo - Costello | 1.00 ls | 3,027,125.00 /ls | 3,027,125 |
| 024119 Demolition | | /sf | 3,027,125 |
| F2010 Building Elements Demolition | 408,500.00 gsf | 7.41 /gsf | 3,027,125 |
| F20 Existing Building Demolition | 408,500.00 gsf | 7.41 /gsf | 3,027,125 |
| F23 Asbestos Containing Floor Material | | | |
| F2020 Hazardous Component Abatement | | | |
| 022820 Asbestos Remediation | | | |
| Abatement - Costello | 1.00 ls | 3,863,950.00 /ls | 3,863,950 |
| 022820 Asbestos Remediation | | /sf | 3,863,950 |
| F2020 Hazardous Component Abatement | 408,500.00 gsf | 9.46 /gsf | 3,863,950 |
| F23 Asbestos Containing Floor Material | 408,500.00 gsf | 9.46 /gsf | 3,863,950 |
| F Special Construction & Demolition | 408,500.00 gsf | 26.15 /gsf | 10,682,273 |
| G Sitework | | | |
| G10 Site Preparation | | | |
| F10 Temporary Construction | | | |
| 323111 Temporary Fencing | | | |
| Temporary construction fence - phase 1 Riggs | 1.00 ls | 184,330.00 /ls | 184,330 |
| 323111 Temporary Fencing | | /gsf | 184,330 |
| F10 Temporary Construction | 408,500.00 gsf | 0.45 /gsf | 184,330 |
| G10 Site Preparation | | | |
| 010200 Allowances | | | |
| Site Derenzo ph 1 allowances | 1.00 allw | 200,000.00 /allw | 200,000 |
| 010200 Allowances | | /gsf | 200,000 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|------------------|-----------------|------------------|
| 015070 Temporary Construction | | | |
| Site Derenzo ph 1 temp staging & temp construction | 1.00 ls | 200,000.00 /ls | 200,000 |
| 015070 Temporary Construction | | /gsf | 200,000 |
| 310000 Site Misc | | | |
| Street sweeping while trucking allowance | 1.00 allo | 90,000.00 /allo | 90,000 |
| <i>Laborer for trade support - Site</i> | <i>wks</i> | <i>/wks</i> | |
| Site Derenzo ph 1 -Equipment mobilization, general requirements | 1.00 ls | 332,000.00 /ls | 332,000 |
| Equipment mobilization, project manager, sitework superintendent - ph 2-4 | 3.00 ls | 140,000.00 /ls | 420,000 |
| <i>Preconstruction survey of neighboring properties by 3rd party</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| <i>(bought with site)</i> | | | |
| Survey/layout - ph 2-4 | 80.00 wk | 1,650.00 /wk | 132,000 |
| Police details - for use by site contractor during trucking & utilities | 100.00 dy | 800.00 /dy | 80,000 |
| Temporary site signage | 1.00 ls | 40,000.00 /ls | 40,000 |
| <i>Prep for construction trailers, incl paving</i> | <i>0.00 ls</i> | <i>/ls</i> | |
| 310000 Site Misc | | /gsf | 1,094,000 |
| 311000 Site Clearing | | | |
| Demo drain/sewer structures | 36.00 ea | 250.00 /ea | 9,000 |
| Sawcut Bituminous concrete paving | 1,250.00 lf | 6.05 /lf | 7,563 |
| Site Derenzo ph 1 site clearing | 1.00 ls | 120,000.00 /ls | 120,000 |
| Remove & Dispose Bituminous Pavements | 139,352.00 sf | 1.00 /sf | 139,352 |
| Remove & Dispose Concrete Pads & Sidewalks | 30,000.00 sf | 2.20 /sf | 66,000 |
| Remove & Dispose Brick Paving | 1,303.00 sf | 3.00 /sf | 3,909 |
| Remove & Dispose Concrete Pad | 287.00 sf | 2.20 /sf | 631 |
| Demo Discus Area Concrete Pad, Posts & Footings | 662.00 sf | 4.00 /sf | 2,648 |
| Remove & Dispose Existing Fence | 2,041.00 lf | 8.00 /lf | 16,328 |
| Remove & Dispose Concrete Wall | 268.00 lf | 75.00 /lf | 20,100 |
| Remove & Dispose Paving Surfacing and Structure t courtyard | 23,334.00 sf | 2.00 /sf | 46,668 |
| Remove & Dispose Planter Box | 13.00 ea | 150.00 /ea | 1,950 |
| Remove & Dispose Concrete Pavements | 2,306.00 sf | 2.00 /sf | 4,612 |
| Salvage existing bench at sport field | 2.00 ea | 2,500.00 /ea | 5,000 |
| Salvage Existing Shed | 1.00 ea | 3,500.00 /ea | 3,500 |
| Demo water piping | 1,592.00 lf | 24.00 /lf | 38,208 |
| Demo ug elec service lines | 300.00 lf | 24.00 /lf | 7,200 |
| Demo Drainage piping | 3,031.00 lf | 24.00 /lf | 72,744 |
| Demo Gas piping | 350.00 lf | 24.00 /lf | 8,400 |
| Demo sewer piping | 350.00 lf | 24.00 /lf | 8,400 |
| Clear and grub site - phase 2-4 (10,128 sf) | 1.00 ls | 40,000.00 /ls | 40,000 |
| Demo Light Poles w/ Bases | 26.00 ea | 250.00 /ea | 6,500 |
| Remove & Dispose Trees, incl stumps (12"-20") | 48.00 ea | 800.00 /ea | 38,400 |
| Demo misc. site items bollards, poles pole bases, etc... | 1.00 ls | 50,000.00 /ls | 50,000 |
| Protect Exist. Utility poles | 3.00 ea | 550.00 /ea | 1,650 |
| Demo site guardrail | 353.00 lf | 25.00 /lf | 8,825 |
| Remove & Dispose Site Curbing | 2,940.00 lf | 2.50 /lf | 7,350 |
| Remove & Dispose Site Curbing at Mass Ave. | 230.00 lf | 15.00 /lf | 3,450 |
| 311000 Site Clearing | | /gsf | 738,388 |
| 312000 Earth Work | | | |
| Strip loam - phase 2 | 760.00 cy | 5.00 /cy | 3,800 |
| Strip loam - phase 3 | 1,669.00 cy | 5.00 /cy | 8,345 |
| Strip loam - phase 4 (7,949 cy, but 4,000 already striped) | 4,000.00 cy | 5.00 /cy | 20,000 |
| Site Derenzo ph 1 - earthwork | 1.00 ls | 335,000.00 /ls | 335,000 |
| Cut to subgrade outside building footprint- Phase 2 | 1,861.00 cy | 16.00 /cy | 29,776 |
| Fill from cut outside building footprint- Phase 2 | 1,861.00 cy | 16.00 /cy | 29,776 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| 312000 Earth Work | | | |
| Fill to subgrade with offsite "ordinary fill" outside building footprint- Phase 2 | 11,549.00 cy | 35.00 /cy | 404,215 |
| Cut to subgrade outside building footprint- Phase 3 | 1,822.00 cy | 16.00 /cy | 29,152 |
| Fill from cut outside building footprint- Phase 3 | 1,822.00 cy | 16.00 /cy | 29,152 |
| Fill to subgrade with offsite "ordinary fill" outside building footprint- Phase 3 | 12,891.00 cy | 35.00 /cy | 451,185 |
| Cut to subgrade outside building footprint- Phase 4 | 394.00 cy | 16.00 /cy | 6,304 |
| Fill from cut outside building footprint- Phase 4 | 394.00 cy | 16.00 /cy | 6,304 |
| Fill to subgrade with offsite "ordinary fill" outside building footprint- Phase 4 | 22,222.00 cy | 35.00 /cy | 777,770 |
| <i>Cut to haul, T&D carried elsewhere</i> | <i>0.00 cy</i> | <i>/cy</i> | |
| Credit to offsite fill due to utility trenches & retention system | (2,400.00) cy | 35.00 /cy | (84,000) |
| Credit to offsite fill due to sport field drainage | (1,216.87) cy | 35.00 /cy | (42,590) |
| Rough grade- Phase 2 | 182,649.00 sf | 0.13 /sf | 24,110 |
| Rough grade- Phase 3 | 151,106.00 sf | 0.13 /sf | 19,946 |
| Rough grade- Phase 4 | 299,780.00 sf | 0.13 /sf | 39,571 |
| Replace contaminated material with offsite ordinary fill | 6,000.00 cy | 35.00 /cy | 210,000 |
| <i>Loam required for landscaping (2,928 + 25% for tailings)</i> | <i>3,660.00 cy</i> | <i>/cy</i> | |
| Screen loam incl on-site trucking | 3,660.00 cy | 18.00 /cy | 65,880 |
| Disposal of tailings | 915.00 cy | 30.00 /cy | 27,450 |
| Disposal of excess loam (6,429 cy -3,000 cy) | 3,429.00 cy | 32.00 /cy | 109,728 |
| 312000 Earth Work | 596,304.00 gsf | 4.19 /gsf | 2,500,873 |
| 312319 Dewatering | | | |
| Site Derenzo ph 1 - Dewatering | 1.00 ls | 65,000.00 /ls | 65,000 |
| 312319 Dewatering | | /gsf | 65,000 |
| 312500 Sedimentation and Erosion Control | | | |
| Site Derenzo ph 1 - erosion control | 1.00 ls | 50,000.00 /ls | 50,000 |
| Maintain siltation control at stockpiles | 1.00 ls | 10,000.00 /ls | 10,000 |
| Siltation barrier | 3,490.00 lf | 10.00 /lf | 34,900 |
| Straw Wattle and Silt Fence | 3,809.00 lf | 10.00 /lf | 38,090 |
| Tree protection fence- (4' high Snow Fence) | 400.00 lf | 10.00 /lf | 4,000 |
| Clean out catch basin/area drain | 29.00 ea | 220.00 /ea | 6,380 |
| Catch Basin Filter | 29.00 ea | 150.00 /ea | 4,350 |
| Inspect catch basin after each storm | 1.00 ls | 10,000.00 /ls | 10,000 |
| <i>Construct/Maintain temp stormwater basins</i> | <i>0.00 sf</i> | <i>0.00 /sf</i> | <i>0</i> |
| <i>Seeding at temporary basin</i> | <i>0.00 sf</i> | <i>0.00 /sf</i> | <i>0</i> |
| Filter Fabric at settling basins | 3,453.00 sf | 1.10 /sf | 3,798 |
| Flexterra or equal, erosion control material | 55,000.00 sf | 1.10 /sf | 60,500 |
| 312500 Sedimentation and Erosion Control | | /gsf | 222,018 |
| 312610 Hazardous Waste Remediation | | | |
| Allowance for repairs to engineered barriers | 1.00 allw | 300,000.00 /allw | 300,000 |
| Water treatment | 1.00 ls | 100,000.00 /ls | 100,000 |
| UST removal | 1.00 ls | 65,000.00 /ls | 65,000 |
| Allowance for clean corridor | 1.00 allw | 100,000.00 /allw | 100,000 |
| 312610 Hazardous Waste Remediation | | /gsf | 565,000 |
| 323111 Temporary Fencing | | | |
| Temporary construction fence - gates - phase 2 | 4.00 ea | 990.00 /ea | 3,960 |
| Temporary construction fence - phase 2 | 1,860.00 lf | 38.00 /lf | 70,680 |
| Temporary construction fence - gates - phase 2 | 2.00 ea | 990.00 /ea | 1,980 |
| Temporary construction fence - phase 3 | 500.00 lf | 38.00 /lf | 19,000 |
| Temporary construction fence - gates | 2.00 ea | 990.00 /ea | 1,980 |
| Temporary construction fence - phase 4 | 2,200.00 lf | 38.00 /lf | 83,600 |
| Temporary construction fence - gates | 4.00 ea | 990.00 /ea | 3,960 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|-------------------|------------------|
| 323111 Temporary Fencing | | | |
| Temporary construction fence - scrim | 9,410.00 lf | 4.50 /lf | 42,345 |
| 323111 Temporary Fencing | | /gsf | 227,505 |
| G10 Site Preparation | 408,500.00 gsf | 14.23 /gsf | 5,812,784 |
| G10 Site Preparation | 408,500.00 gsf | 14.68 /gsf | 5,997,114 |
| G20 Site Improvements | | | |
| G20 Site Improvements | | | |
| 316616 Permanent Soldier Pile Wall | | | |
| Filter fabric | 5,432.00 sf | 2.00 /sf | 10,864 |
| Miradrain 6000 panel board | 5,432.00 sf | 8.00 /sf | 43,456 |
| 316616 Permanent Soldier Pile Wall | | /gsf | 54,320 |
| 321005 Roadways | | | |
| Gravel base course bit paving 12" - ph 2-4 | 3,934.17 cy | 38.00 /cy | 149,498 |
| Site Derenzo ph 1 Bituminous paving Binder only - (2.5" + 1.5") - ph 1 | 1.00 ls | 115,000.00 /ls | 115,000 |
| Bituminous concrete paving Top course only - (1.5") - ph 2-4 | 3,474.00 sy | 18.00 /sy | 62,532 |
| Bituminous concrete paving RD - (2.5" + 1.5") - ph 2-4 | 9,442.00 sy | 31.50 /sy | 297,423 |
| Bituminous concrete paving HD - (3.25"+1.75"+1.50") - ph 2-4 | 0.00 sy | /sy | |
| Vertical granite curbs - reset only as needed on \ Mass Ave | 1.00 al | 5,000.00 /al | 5,000 |
| Vertical granite curbs - straight (incl both sides of Schuler Ct) | 5,406.00 lf | 48.00 /lf | 259,488 |
| Vertical granite curbs - radius (includes both sides of Schuler Ct) | 1,036.00 lf | 54.00 /lf | 55,944 |
| Vertical granite curbs - credit for a portion of West Schuler ct | (280.00) lf | 48.00 /lf | (13,440) |
| Traffic signs | 38.00 ea | 495.00 /ea | 18,810 |
| Reserved praking | 55.00 ea | 350.00 /ea | 19,250 |
| Pavement markings - temp | 1.00 ls | 5,500.00 /ls | 5,500 |
| Pavement markings - parking spots | 233.00 ea | 49.50 /ea | 11,534 |
| Pavement markings - add for handicap | 8.00 ea | 121.00 /ea | 968 |
| Pavement markings - cross walks, misc | 3.00 ls | 2,000.00 /ls | 6,000 |
| Pavement markings - add for "reserved" | 55.00 ea | 55.00 /ea | 3,025 |
| Rubble strip, 6" concrete with bumps 4/L7.02 | 876.00 sf | 30.00 /sf | 26,280 |
| 321005 Roadways | | /gsf | 1,022,812 |
| 321010 Pedestrian Paving | | | |
| Galv railing at stairs at loading dock | 25.00 lf | 225.00 /lf | 5,625 |
| Site Derenzo ph gravel prep | 1.00 ls | 32,000.00 /ls | 32,000 |
| Gravel base at conc pavement (1/L7.02) 8" - ph 2-4 | 1,873.46 cy | 40.00 /cy | 74,938 |
| Fine grade under site concrete - ph 2-4 | 60,700.00 sf | 0.40 /sf | 24,280 |
| Gravel base at bituminous walks (2/L7.02) 8" - ph 2-4 | 378.03 cy | 40.00 /cy | 15,121 |
| Gravel base at bituminous walks (2/L7.02) 12" - ph 2-4 | 622.50 cy | 40.00 /cy | 24,900 |
| Generator and transformer pads (4 ea) | 1,060.00 sf | 15.12 /sf | 16,027 |
| Bituminous paving - pedestrian (not incl bike path) | 1,360.89 sy | 37.00 /sy | 50,353 |
| Bituminous paving - vehicular depth (not incl bike path) | 1,494.00 sy | 40.00 /sy | 59,760 |
| Truncated domes - for HC ramps | 400.00 sf | 25.99 /sf | 10,395 |
| Grass paver | 385.00 sf | 18.00 /sf | 6,930 |
| Pedestrian concrete walks | 40,853.00 sf | 11.91 /sf | 486,437 |
| Pedestrian concrete walks - inside courtyard not colored | 2,460.00 sf | 11.91 /sf | 29,299 |
| Pedestrian concrete walks - replace at Mass Ave | 5,607.00 sf | 11.91 /sf | 66,763 |
| Vehicular concrete paving | 9,149.00 sf | 13.89 /sf | 127,093 |
| HD Concrete paving at loading dock | 2,633.00 sf | 13.89 /sf | 36,576 |
| Thickened slab for benches | 14.00 cy | 283.50 /cy | 3,969 |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|------------------|
| 321010 Pedestrian Paving | | | |
| Thickened slab for bike racks 12" | 26.00 cy | 283.50 /cy | 7,371 |
| Concrete Bench Pad at Mass Ave (4 ea) | 14.20 cy | 800.00 /cy | 11,360 |
| 321010 Pedestrian Paving | | /gsf | 1,089,197 |
| 321030 Amphitheater | | | |
| Precast conc curb - 12"w x 18"h (9/L7.02) | 394.00 lf | 150.00 /lf | 59,100 |
| Nailers for synthetic | 830.00 lf | 20.00 /lf | 16,600 |
| Synthetic field surfacing - ampitheater | 4,100.00 sf | 12.00 /sf | 49,200 |
| Add for 23 mm resilient pad | 4,100.00 sf | 1.85 /sf | 7,585 |
| Liner material - 25 mil | 4,100.00 sf | 1.10 /sf | 4,510 |
| Specialty drain adjacent to curb | 415.00 lf | 65.00 /lf | 26,975 |
| Galv railing at ramp ampitheater | 60.00 lf | 225.00 /lf | 13,500 |
| Ramp wall at Ampitheater | 56.00 lf | 401.63 /lf | 22,491 |
| CIP retaining wall footing (5' exp) - say 4'w x 18" dp x 100" | 22.22 cy | 779.63 /cy | 17,323 |
| at ampitheater (3' exp) - say 12"w x 6'h x 100' | 22.22 cy | 1,350.00 /cy | 29,997 |
| Concrete mow strip below picket fence | 6.11 cy | 1,350.00 /cy | 8,249 |
| 321030 Amphitheater | | /gsf | 255,530 |
| 321032 East Courtyard | | | |
| Wood terraced seating on frame IPE | 590.00 sf | 150.00 /sf | 88,500 |
| Prefab weathering steel planter - courtyard 1/L7.11 24" h walls x591' | 1,182.00 sf | 110.00 /sf | 130,020 |
| Prefab weathering steel planter - courtyard 1/L7.11 bottom | 1,527.00 sf | 110.00 /sf | 167,970 |
| Conc pavers on grade, mortored (7/L7.02) | 2,980.00 sf | 38.00 /sf | 113,240 |
| Layered stone and planting mix at raised planters L7.11 | 103.70 cy | 120.00 /cy | 12,444 |
| Conc pavers on pedestals (7/L7.02) | 7,745.00 sf | 38.00 /sf | 294,310 |
| 321032 East Courtyard | | /gsf | 806,484 |
| 321034 Playground | | | |
| Dense grade under safety surfacing (14/L7.02) 6" - with surfacing cost below 1.8 tn/cy | 122.76 tn | 28.00 /tn | 3,437 |
| Crushed stone under safety surfacing (14/L7.02) 12" 1.6 tn/cy | 218.30 tn | 32.00 /tn | 6,986 |
| Play equipment, adjacent to wing C TBD | 1.00 ls | 100,000.00 /ls | 100,000 |
| Safety surfacing (13/L702) | 3,684.00 sf | 34.00 /sf | 125,256 |
| 321034 Playground | | /gsf | 235,679 |
| 321400 Site Improvements | | | |
| Footings for bollards - fixed, manually retractable | 39.00 ea | 897.75 /ea | 35,012 |
| Footing/wall School sign | 1.00 ls | 5,670.00 /ls | 5,670 |
| Footing for flagpole | 1.00 ls | 2,362.50 /ls | 2,363 |
| Manually retractable bollard (5/L7.04) | 2.00 ea | 2,500.00 /ea | 5,000 |
| Fixed bollards | 37.00 ea | 1,200.00 /ea | 44,400 |
| Freestanding benches steel and wood, no back (L7.05) | 86.00 lf | 448.43 /lf | 38,565 |
| Benches steel and wood, no back (L7.05) - rad adjacent to bldg | 48.00 lf | 750.00 /lf | 36,000 |
| Benches steel and wood, no back (L7.05) - straight adjacent to bldg | 54.00 lf | 750.00 /lf | 40,500 |
| Trash/recycle receptacles (4/L704) | 4.00 ea | 3,870.00 /ea | 15,480 |
| Memorial bench reinstallation | 1.00 ea | 1,500.00 /ea | 1,500 |
| Memorial in planting | 2.00 ea | 2,000.00 /ea | 4,000 |
| Flagpole (3/L7.04) | 1.00 ea | 15,570.00 /ea | 15,570 |
| Bike repair station (2/L7.04) | 1.00 ea | 5,580.00 /ea | 5,580 |
| Bike rack (1/L7.04) | 50.00 ea | 819.00 /ea | 40,950 |
| Granite edging at exit from C wing (6/L7.02) | 120.00 lf | 100.00 /lf | 12,000 |
| School site sign | 1.00 ls | 20,000.00 /ls | 20,000 |
| credit for e/b with phase 1 | (1.00) ls | 30,000.00 /ls | (30,000) |



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|-------------------|------------------|
| 321400 Site Improvements | | /gsf | 292,590 |
| 321404 Modular Retaining Walls | | | |
| Retaining Wall at east property line "below walk - 130x3 | 390.00 sf | 45.00 /sf | 17,550 |
| Retaining Wall at east property line adjacent to fence- 115x3 | 445.00 sf | 45.00 /sf | 20,025 |
| Retaining Wall adjacen to transformer/swithgear - 65' x 3 | 195.00 sf | 45.00 /sf | 8,775 |
| 321404 Modular Retaining Walls | | /gsf | 46,350 |
| 321405 CIP Stairs & Walls | | | |
| CIP retaining wall footing (5' exp) - say 6'w x 18" dp x 75' | 25.00 cy | 779.63 /cy | 19,491 |
| at butterfly pond CIP retaining walll (5' exp) - say 18"w x 7'h x 76' | 29.56 cy | 1,550.00 /cy | 45,818 |
| CIP retaining wall footing (5' exp) - say 6'w x 18" dp x 155" | 51.67 cy | 779.63 /cy | 40,283 |
| at the cliff CIP retaining walll (5' exp) - say 18"w x 8'h x 155" | 68.89 cy | 1,550.00 /cy | 106,780 |
| CIP retaining wall footing (5' exp) - say 6'w x 18" dp x 25' | 6.00 cy | 779.63 /cy | 4,678 |
| at ampitheater CIP retaining walll (5' exp) - say 18"w x 5'h x 25' | 6.94 cy | 1,550.00 /cy | 10,757 |
| Foundation for swing barrier gate 6/L7.03 | 2.00 ls | 6,000.00 /ls | 12,000 |
| Gabion Retaining wall at East property line - 75'? x 4'? | 300.00 sf | 40.00 /sf | 12,000 |
| 321405 CIP Stairs & Walls | | /gsf | 251,806 |
| 321825 Sport Fields | | | |
| Synthetic turf field - stone base - (10" min+2") 2 types of stone profile | 10,464.06 tn | 28.00 /tn | 292,994 |
| Synthetic turf field - grading | 176,581.00 sf | 0.20 /sf | 35,316 |
| Synthetic turf field - geotec fabric | 176,581.00 sf | 0.40 /sf | 70,632 |
| <i>Gravel below (no clear) with cuts & fill (entire footpring is in fill)</i> | <i>0.00 tn</i> | <i>0.00 /tn</i> | <i>0</i> |
| Synthetic field surfacing - main fields (synthetic infill) | 176,581.00 sf | 5.25 /sf | 927,050 |
| Line markings | 1.00 ls | 80,000.00 /ls | 80,000 |
| Field liner equal to durascrim 16 mil | 176,581.00 sf | 1.00 /sf | 176,581 |
| Resilient underlayment | 176,581.00 sf | 1.50 /sf | 264,872 |
| Extended warranty - 8 yr | 1.00 ls | 0.01 /ls | 0 |
| 3rd party testing | 1.00 ls | 25,000.00 /ls | 25,000 |
| Maintenace equipment, Gator, with sweeper and rake | 1.00 ls | 15,000.00 /ls | 15,000 |
| Perimeter ACO drain in place (concrete by others) | 1,800.00 lf | 100.00 /lf | 180,000 |
| Drain piping 12" - to connect chambers | 330.00 lf | 40.00 /lf | 13,200 |
| STDI + TBD structures | 43.00 ea | 3,000.00 /ea | 129,000 |
| Drainage chambers F&I (620 x 710) | 8,800.00 ea | 45.00 /ea | 396,000 |
| Conc nailer curb at synthetic field perimeter - ph 4 | 2,444.00 lf | 85.00 /lf | 207,740 |
| Concrete slab (w/#6 rebar) at dugouts (4/L8.6) | 4,953.00 sf | 12.29 /sf | 60,848 |
| Add 18" diam sonotube at fence posts below perimeter curb (1/L8.11) | 330.00 ea | 325.00 /ea | 107,250 |
| Bases w/ subsurface structures (x/L16, x/L17) | 6.00 ea | 500.00 /ea | 3,000 |
| Home plate with concrete anchor (x/L16, x/L17) | 4.00 ea | 900.00 /ea | 3,600 |
| Pitching plate with concrete anchor (x/L16, x/L17) | 4.00 ea | 900.00 /ea | 3,600 |
| Football goal post | 1.00 pr | 8,000.00 /pr | 8,000 |
| Skinned infill suface at bull pen with marking and edging | 420.00 sf | 35.00 /sf | 14,700 |
| Shot put and javaline bases | 1.00 ls | 20,000.00 /ls | 20,000 |
| Geotextile fabric | 34,000.00 sf | 0.80 /sf | 27,200 |
| Crushed stone - A 620' x 14' x 16" | 685.66 tn | 32.00 /tn | 21,941 |
| Crushed stone - B 710' x 15' x 24" | 1,262.22 tn | 32.00 /tn | 40,391 |
| Crushed stone - credit for chambers | (720.00) tn | 32.00 /tn | (23,040) |
| E/b for chambers | 1,330.00 lf | 40.00 /lf | 53,200 |
| 321825 Sport Fields | 178,820.00 gsf | 17.64 /gsf | 3,154,075 |
| 323100 Steel Picket Fence and Gages | | | |
| PKT (Decorative) - 4' - 2/L-7.10 | 47.00 lf | 155.00 /lf | 7,285 |
| PKT (Decorative) - 4' Gate | 2.00 lvs | 1,800.00 /lvs | 3,600 |
| PKT (Decorative) - 6' | 160.00 lf | 185.00 /lf | 29,600 |
| PFT (Decorative) - 6' gate | 2.00 lvs | 2,000.00 /lvs | 4,000 |

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 323100 Steel Picket Fence and Gages | | | |
| PKT (Decorative) - 8' | 452.00 lf | 225.00 /lf | 101,700 |
| PKT (Decorative) - 8' Gate | 1.00 lvs | 3,000.00 /lvs | 3,000 |
| 323100 Steel Picket Fence and Gages | | | 149,185 |
| 323113 Chain Link Fence | | | |
| Swing barrier gate (6/L703) at loading dock - 28' | 1.00 ls | 14,000.00 /ls | 14,000 |
| Swing barrier gate at Mill St parking per 3/30 email - 24' | 1.00 ls | 14,000.00 /ls | 14,000 |
| Backstop with canopy - 24' w/ 8" post - 74' long | 1.00 ls | 20,160.00 /ls | 20,160 |
| Backstop with canopy - 30 w/ 6" post - 90' long | 1.00 ls | 29,200.00 /ls | 29,200 |
| Fixed ball control netting with high wind safety release - 30'h - 634' | 19,020.00 sf | 8.00 /sf | 152,160 |
| Concrete fence base and mow strip 18"x12" 5/L7.02 | 850.00 lf | 75.00 /lf | 63,750 |
| Concrete fence base at lawn (5/L7.02) | 270.00 lf | 75.00 /lf | 20,250 |
| Posts to support baseball net - 30'h assume 20' oc | 34.00 ea | 1,750.00 /ea | 59,500 |
| Foul pole 24' | 2.00 ea | 3,200.00 /ea | 6,400 |
| Rolling gate at soccer field - 45' | 1.00 ea | 15,000.00 /ea | 15,000 |
| CLF - 4' Mounted on wall - 1/L-7.09 - straight | 130.00 lf | 62.00 /lf | 8,060 |
| CLF - 8' - 2/L-7.09 | 1,024.00 lf | 86.00 /lf | 88,064 |
| CLF - 8' Gate | 7.00 lvs | 1,200.00 /lvs | 8,400 |
| CLF - 30' at discus and shotput | 81.00 lf | 250.00 /lf | 20,250 |
| CLF - 12' | 340.00 lf | 111.00 /lf | 37,740 |
| CLF - 51" at athletic field | 981.00 lf | 65.00 /lf | 63,765 |
| CLF - 51" Gate | 9.00 lvs | 1,100.00 /lvs | 9,900 |
| CLF - 99" | 640.00 lf | 90.00 /lf | 57,600 |
| 323113 Chain Link Fence | | | 688,199 |
| 329000 Landscaping | | | |
| Irrigation - limited fields, mostly plantings | 1.00 ls | 292,000.00 /ls | 292,000 |
| Temporary seeding for erosion control | 1.00 ls | 5,500.00 /ls | 5,500 |
| Seeded lawn mix - 1/L701 | 56,225.00 sf | 0.28 /sf | 15,743 |
| Meadow mix - 5/L-7.01 | 33,086.00 sf | 0.29 /sf | 9,595 |
| Wetland mix - 4/L-7.01 | 6,392.00 sf | 0.29 /sf | 1,854 |
| Athletic turf mix - 7/L7.01 | 59,937.00 sf | 0.44 /sf | 26,372 |
| Shady Woodland Mix - 3/L-7.01 | 10,982.00 sf | 0.35 /sf | 3,844 |
| Stone Mulch - 14/L-7.02 | 3,163.50 sf | 14.00 /sf | 44,289 |
| Lawn Maintenance by Owner | 0.00 ph | /ph | |
| Erosion control mat | 24,000.00 sf | 0.65 /sf | 15,600 |
| Drainage under lawn | 59,937.00 sf | 1.00 /sf | 59,937 |
| Memorial planting TBD | 1.00 ls | 4,000.00 /ls | 4,000 |
| Tree - Shadblow Serviceberry - 7-8ft | 40.00 ea | 825.00 /ea | 33,000 |
| Tree - Paperbark Maple | 1.00 ea | 825.00 /ea | 825 |
| Tree - Red Maple - 2-2.5 in CAL | 7.00 ea | 825.00 /ea | 5,775 |
| Tree - Heritage River Birch - 10-12' ht | 4.00 ea | 1,175.00 /ea | 4,700 |
| Tree - Forest Pansy Redbud - 2-2.5 in cal | 2.00 ea | 825.00 /ea | 1,650 |
| Tree - Flowering Dogwood - 2-2.5 in cal | 2.00 ea | 825.00 /ea | 1,650 |
| Tree - Conelancherry Dogwood - 4-5' ht | 3.00 ea | 550.00 /ea | 1,650 |
| Tree - Green Hawthorn - 2-2.5 in cal | 6.00 ea | 825.00 /ea | 4,950 |
| Tree - Autumn Gold Ginko - 2-2.5 in cal | 6.00 ea | 825.00 /ea | 4,950 |
| Tree - Honey Locust - 2-2.5 in cal | 9.00 ea | 825.00 /ea | 7,425 |
| Tree - Carolina Silverbell - 2-2.5 in cal | 5.00 ea | 825.00 /ea | 4,125 |
| Tree - Common Witch Hazel - 5-6 ft ht | 21.00 ea | 550.00 /ea | 11,550 |
| Tree - Vernal Wich Hazel - 5-6 ft ht | 12.00 ea | 550.00 /ea | 6,600 |
| Tree - Red Maple - 8-10 ft ht | 28.00 ea | 825.00 /ea | 23,100 |
| Tree - Tulip Tree - 3-3.5 in cal | 3.00 ea | 1,760.00 /ea | 5,280 |
| Tree - Cardinal Crabapple - 2-2.5 in cal | 3.00 ea | 825.00 /ea | 2,475 |
| Tree - Spring Snow Crabapple - 2-2.5 in cal | 3.00 ea | 825.00 /ea | 2,475 |
| Tree - Black Tupelo - 2-2.5 in cal | 5.00 ea | 825.00 /ea | 4,125 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|--------------|
| 329000 Landscaping | | | |
| Tree - Sargent Cherry - 2-2.5 in cal | 10.00 ea | 825.00 /ea | 8,250 |
| Tree - White Pine - 2-2.5 in cal | 5.00 ea | 825.00 /ea | 4,125 |
| Tree - Pin Oak - 3-3.5 in cal | 3.00 ea | 1,760.00 /ea | 5,280 |
| Tree - Japanese Stewartia - 2-2.5 in cal | 2.00 ea | 825.00 /ea | 1,650 |
| Tree - Bald Cypress - 8-10 ft | 4.00 ea | 825.00 /ea | 3,300 |
| Tree - Elm - 3-3.5 in cal | 17.00 ea | 1,760.00 /ea | 29,920 |
| Tree - Elm - 8 in cal | 3.00 ea | 6,000.00 /ea | 18,000 |
| Shrub - Red Chokeberry - 3 gal | 34.00 ea | 90.00 /ea | 3,060 |
| Shrub - Butterfly Bush - 3 gal | 3.00 ea | 90.00 /ea | 270 |
| Shrub - Ruby Spice Summersweet - 3 gal | 58.00 ea | 90.00 /ea | 5,220 |
| Shrub - Compact Red Twig Dogwood - 5 gal | 82.00 ea | 150.00 /ea | 12,300 |
| Shrub - Blue Shadow Fothergilla - 5 gal | 31.00 ea | 150.00 /ea | 4,650 |
| Shrub - Pee Wee Oakleaf Hydrangea - 3 gal | 92.00 ea | 90.00 /ea | 8,280 |
| Shrub - Densa Inkberry | 38.00 ea | 90.00 /ea | 3,420 |
| Shrub - Red Sprite Winterberry - 5 gal | 4.00 ea | 150.00 /ea | 600 |
| Shrub - Little Henry Sweetspire - 3 gal | 110.00 ea | 90.00 /ea | 9,900 |
| Shrub - Spicebush - 5 gal | 17.00 ea | 150.00 /ea | 2,550 |
| Shrub - Dwarf Meyer's lilac - 5 gal | 7.00 ea | 150.00 /ea | 1,050 |
| Shrub - Arborvitae - 7-8ft ht | 35.00 ea | 400.00 /ea | 14,000 |
| Shrub - Dwarf Korean Spice Viburnum - 5 gal | 5.00 ea | 150.00 /ea | 750 |
| Shrub - Arrow-wood Viburnum - 3 gal | 30.00 ea | 90.00 /ea | 2,700 |
| Shrub - Mariesi Double Fire Viburnum - 3 gal | 3.00 ea | 90.00 /ea | 270 |
| Shrub - American Cranberry Bush - 3 gal | 3.00 ea | 90.00 /ea | 270 |
| Perennial - Ice Dance Japanese Sedge - 1 gal | 1,016.00 ea | 15.00 /ea | 15,240 |
| Perennial - All Gold Forest Grass - 1 gal | 671.00 ea | 15.00 /ea | 10,065 |
| Perennial - Blue Rug Creeping Juniper - 1 gal | 575.00 ea | 15.00 /ea | 8,625 |
| Perennial - Big Blue Lily Turf - 6" pot | 1,737.00 ea | 12.00 /ea | 20,844 |
| Perennial - Walker's Low Cat Mint - 1 gal | 267.00 ea | 15.00 /ea | 4,005 |
| Perennial - Pachysandra - 4" pot | 1,250.00 ea | 12.00 /ea | 15,000 |
| Perennial - Little Bunny Fountain Grass - 1 gal | 290.00 ea | 15.00 /ea | 4,350 |
| Plugs for the Raingarden - Broom Sedge (4 per sf) | 4,392.00 ea | 2.50 /ea | 10,980 |
| Plugs for the Raingarden - Fox Sedge (4 per sf) | 4,376.00 ea | 2.50 /ea | 10,940 |
| Plugs for the Raingarden - Green Coneflower (4 per sf) | 3,460.00 ea | 2.50 /ea | 8,650 |
| Plugs for the Raingarden - Great Blue Lobelia (4 per sf) | 3,232.00 ea | 2.50 /ea | 8,080 |
| Plugs for the Raingarden - Switch Grass (4 per sf) | 3,756.00 ea | 2.50 /ea | 9,390 |

329000 Landscaping

/gsf

871,023**329010 Loam**

| | | | |
|---|-------------|------------|--------|
| Reuse and ammend loam - at lawns and fields (56,225 sf x 6" +0%)(1/L7.01) | 1,041.20 cy | 18.00 /cy | 18,742 |
| Compost tilled into existing at shady woodland mix (10,982 sf x 3" +25%)(3/L7.01) | 127.11 cy | 110.00 /cy | 13,982 |
| Offsite loam at shady woodland mix (10,982 sf x 1" +50%)(3/L7.01) | 50.84 cy | 80.00 /cy | 4,067 |
| Loosen top 2" prior to placing loam at wetland mix (4/L7.01) | 6,392.00 sf | 0.50 /sf | 3,196 |
| Offsite loam at wetland mix (6,392 x 1" +50%)(4/L7.01) | 76.94 sf | 80.00 /sf | 6,155 |
| Reuse and ammend loam - at meadow mix (33,086 sf x 4" +0%)(5/L7.01) | 408.47 cy | 18.00 /cy | 7,352 |
| Reuse and ammend loam at athletic fields ((59,937 sf x 8" +0%)(7/L7.01) | 1,479.93 cy | 18.00 /cy | 26,639 |
| Furnish and place offsite loam - at planting beds (13,700 sf x 18" +25%) | 951.39 cy | 65.00 /cy | 61,840 |
| Furnish and place offsite loam - at trees (36" = 4 cy per tree) | 808.00 cy | 65.00 /cy | 52,520 |

329010 Loam**194,494****G20 Site Improvements****408,500.00 gsf****22.31 /gsf****9,111,743****G20 Site Improvements****408,500.00 gsf****22.31 /gsf****9,111,743****G30 Site Civil/Mechanical Utilites**



Arlington High School

8/14/2020

CONSIGLI
Est. 1905

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|---|-----------------------|------------------|------------------|
| G30 Civil Mechanical Utilities | | | |
| 331000 Water Utilities | | | |
| Fire hydrant - phase 2-4 | 3.00 ea | 4,950.00 /ea | 14,850 |
| Gate Valve & Box | 7.00 ea | 1,485.00 /ea | 10,395 |
| Fire water line - 3" Copper Type "K" Phase 4 | 45.00 lf | 30.00 /lf | 1,350 |
| Fire water line - 8" | 1,015.00 lf | 120.00 /lf | 121,800 |
| Fire water line - 6" | 235.00 lf | 100.00 /lf | 23,500 |
| Wet tap w/ 8" tee | 3.00 ea | 10,000.00 /ea | 30,000 |
| Cap existing main - 8" | 2.00 ea | 800.00 /ea | 1,600 |
| Pressure test & chlorinate - ph 2-4 | 1,295.00 lf | 5.00 /lf | 6,475 |
| | | /gsf | 209,970 |
| 333000 Sanitary Sewerage | | | |
| Allowance for utility shutdown and tempoary bypass - phase 2 | 1.00 allw | 50,000.00 /allw | 50,000 |
| Sanitary sewer piping - (6" PVC) - ph 2-4 | 1,075.00 lf | 82.00 /lf | 88,150 |
| <i>New Science Waste Tank - w/ plumbing</i> | <i>0.00 ea</i> | <i>0.00 /ea</i> | <i>0</i> |
| Sanitary sewer Doghouse Manhole at MWRA Line | 2.00 ea | 22,450.00 /ea | 44,900 |
| Grease Tank (no size provided, P2.00b)- Phase 2 assume 5,000 gal | 1.00 ea | 20,000.00 /ea | 20,000 |
| Sanitary sewer manholes - ph 2-4 | 9.00 ea | 4,400.00 /ea | 39,600 |
| Sanitary sewer testing - structures - ph 2-4 | 11.00 ea | 220.00 /ea | 2,420 |
| Clean & Flush New Sanitary Piping - ph 2-4 | 1,075.00 lf | 2.00 /lf | 2,150 |
| Video Inspections of New Sanitary Piping w/ DVD Media - ph 2-4 | 1,075.00 lf | 9.50 /lf | 10,213 |
| | | /gsf | 257,433 |
| 334000 Stormwater Utilities | | | |
| HDPE - perf 4" | 920.00 lf | 78.00 /lf | 71,760 |
| HDPE - 4" | 100.00 lf | 78.00 /lf | 7,800 |
| HDPE - 6" | 650.00 lf | 79.00 /lf | 51,350 |
| HDPE - 8" | 240.00 lf | 80.00 /lf | 19,200 |
| HDPE - 10" | 70.00 lf | 82.00 /lf | 5,740 |
| HDPE - 12" | 1,315.00 lf | 82.00 /lf | 107,830 |
| HDPE - 15" | 25.00 lf | 86.00 /lf | 2,150 |
| HDPE - 18" | 85.00 lf | 90.00 /lf | 7,650 |
| HDPE - 24" | 170.00 lf | 100.00 /lf | 17,000 |
| HDPE - 30" | 390.00 lf | 115.00 /lf | 44,850 |
| Drainage retention including excavation, t & d - 54'x21'x4.5'dp | 189.00 cy | 180.00 /cy | 34,020 |
| Rain garden complete (5/C5.3.0) - 3'-48" special loam + crushed stone | 1,335.00 sf | 35.00 /sf | 46,725 |
| Rip rap | 245.00 sf | 36.00 /sf | 8,820 |
| Catch basins w/ Hoods (5'-12' depth) - | 4.00 ea | 5,000.00 /ea | 20,000 |
| Outlet Control Structure | 2.00 ea | 4,500.00 /ea | 9,000 |
| Water Quality Unit (STC 900) | 5.00 ea | 16,500.00 /ea | 82,500 |
| FES structure | 4.00 ea | 4,500.00 /ea | 18,000 |
| Area Drains (Nyloplast Basins 24" dia.) | 9.00 ea | 1,500.00 /ea | 13,500 |
| Drain Manholes (< 8' dia.) - ph 2-4 | 13.00 ea | 4,500.00 /ea | 58,500 |
| Drain Manholes (extra large.) - ph 2-4 | 2.00 ea | 7,500.00 /ea | 15,000 |
| Drain Doghouse manhole | 1.00 ea | 18,000.00 /ea | 18,000 |
| Change CB to MH | 2.00 ea | 1,800.00 /ea | 3,600 |
| Modify mh between phases | 7.00 ea | 1,400.00 /ea | 9,800 |
| Tie into existing mh - on site | 3.00 ea | 3,000.00 /ea | 9,000 |
| Trench Drain at Loading Dock | 44.00 lf | 125.00 /lf | 5,500 |
| Clean & Flush New Drainage Piping | 3,965.00 lf | 2.00 /lf | 7,930 |
| Video Inspections of New Drainage Piping w/ DVD Media | 3,965.00 lf | 5.00 /lf | 19,825 |
| | | /gsf | 715,050 |
| G30 Civil Mechanical Utilities | 408,500.00 gsf | 2.90 /gsf | 1,182,453 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|-----------------------|------------------|------------------|
| G3005 Enabling Utilities | | | |
| 334001 Relocate 48" Storm Drain | | | |
| Site Derenzo - ph 1 storm culver relocation | 700.00 lf | 2,800.00 /lf | 1,960,000 |
| 334001 Relocate 48" Storm Drain | | /gsf | 1,960,000 |
| G3005 Enabling Utilities | 408,500.00 | 4.80 | 1,960,000 |
| G3010 Water Supply | | | |
| 331000 Water Utilities | | | |
| Site Derenzo ph 1- Water line - 6"/8" | 1.00 ls | 155,000.00 /ls | 155,000 |
| 331000 Water Utilities | | /gsf | 155,000 |
| G3010 Water Supply | 408,500.00 gsf | 0.38 /gsf | 155,000 |
| G3020 Sanitary Sewer | | | |
| 333000 Sanitary Sewerage | | | |
| Site Derenzo ph 1 sanitary | 1.00 ls | 55,000.00 /ls | 55,000 |
| 333000 Sanitary Sewerage | | /gsf | 55,000 |
| G3020 Sanitary Sewer | 408,500.00 gsf | 0.14 /gsf | 55,000 |
| G3030 Storm Drainage | | | |
| 334000 Stormwater Utilities | | | |
| Site Derenzo ph 1 drainage | 1.00 ls | 140,000.00 /ls | 140,000 |
| 334000 Stormwater Utilities | | /gsf | 140,000 |
| G3030 Storm Drainage | 408,500.00 gsf | 0.34 /gsf | 140,000 |
| G3040 Heating Distribution | | | |
| 335000 E/B for Gas | | | |
| Site Derenzo ph 1 gas e/b | 1.00 ls | 45,000.00 /ls | 45,000 |
| 335000 E/B for Gas | | /gsf | 45,000 |
| G3040 Heating Distribution | 408,500.00 gsf | 0.11 /gsf | 45,000 |
| G30 Site Civil/Mechanical Utilites | 408,500.00 gsf | 8.66 /gsf | 3,537,453 |
| G40 Site Electrical Utilities | | | |
| G40 Electrical Utilities | | | |
| 110615 Audiovisual Systems - Theater | | | |
| Ampitheater Lab devices, cabling, power, and equipment | 0.00 ea | /ea | |
| 260099 Electric EBP#2 | | | |
| Wayne J Griffin | 1.00 ls | 187,200.00 /ls | 187,200 |

90% CD Estimate

MSBA Project # 2015-0010-0505

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 260099 Electric EBP#2 | | /gsf | 187,200 |
| 260508 Site Electric | | | |
| Feeder (PVC/CU) - 200A [switchboard to fire pump controller] | 40.00 lf | 30.47 /lf | 1,219 |
| Feeder (PVC/CU) - 225A [generator to fire pump controller] | 360.00 lf | 36.28 /lf | 13,062 |
| Feeder (PVC/CU) - 400A [generator to ATS-LRS] | 360.00 lf | 60.90 /lf | 21,924 |
| Feeder (PVC/CU) - 400A [generator to ATS-E] | 360.00 lf | 60.90 /lf | 21,924 |
| Feeder (PVC/CU) - 3000A [generator to ATS-OS-C] | 365.00 lf | 568.29 /lf | 207,426 |
| Feeder (PVC/CU) - 3000A [generator to ATS-OS-E] | 365.00 lf | 568.29 /lf | 207,426 |
| Feeder (PVC/AL) - 4000A [secondary] | 60.00 lf | 814.36 /lf | 48,862 |
| Empty conduit - sch 40 PVC: 2 x 2" [future E.V.] | 2,000.00 lf | 12.82 /lf | 25,644 |
| Empty conduit - sch 40 PVC: 2 x 2" [future P.V.] | 500.00 lf | 12.82 /lf | 6,411 |
| Empty conduit - sch 40 PVC: 2 x 4" [secondary] | 60.00 lf | 19.98 /lf | 1,199 |
| Empty conduit - sch 40 PVC: 2 x 4" [spare] | 350.00 lf | 19.98 /lf | 6,993 |
| Empty conduit - sch 40 PVC: 4 x 4" | 400.00 lf | 38.87 /lf | 15,548 |
| Empty conduit - sch 40 PVC: 12 x 4" [secondary] | 60.00 lf | 76.24 /lf | 4,574 |
| Empty conduit - GRC - 3" - HH circuitry | 971.00 lf | 51.56 /lf | 50,061 |
| Magnetic warning tape - 1/8" | 7,500.00 lf | 5.08 /lf | 38,089 |
| Connect to existing Utility Co. manhole | 1.00 ea | 2,705.64 /ea | 2,706 |
| Electric manhole - 6'x12x7' | 4.00 ea | 7,668.88 /ea | 30,676 |
| Cast iron manhole frame/cover, 32"D x 6'H grade rings | 4.00 ea | 1,310.20 /ea | 5,241 |
| Site lighting handhole and cover - 2'x2'x3' | 88.00 ea | 1,092.96 /ea | 96,180 |
| Power handhole and cover - 4'x4'x4' | 8.00 ea | 1,480.60 /ea | 11,845 |
| Utility meter sockets (meter by Util. Co.) | 5.00 ea | 346.73 /ea | 1,734 |
| Transclosures - 4'W x 4'L x 4'D (N3R) | 2.00 ea | 10,071.84 /ea | 20,144 |
| 260508 Site Electric | | /gsf | 838,886 |
| 260583 Equipment Wiring | | | |
| Electric vehicle charging station / dual pedestal / cable mgmt. | 10.00 ea | 11,414.88 /ea | 114,149 |
| 260583 Equipment Wiring | | /gsf | 114,149 |
| 262700 Distribution Equipment | | | |
| Transformer testing and start-up | 0.00 ea | /ea | |
| Transformer rigging and setting | 0.00 ea | /ea | |
| 262705 Distribution Feeders | | | |
| Feeder (PVC/CU) - 40A [EV car charging stations] | 1,200.00 lf | 7.82 /lf | 9,379 |
| 262705 Distribution Feeders | | /gsf | 9,379 |
| 265098 Sports Lighting | | | |
| Sports lighting controllers | 2.00 ea | 2,778.88 /ea | 5,558 |
| Feeder (PVC/CU) - 250A [sports lighting controllers] | 837.00 lf | 34.26 /lf | 28,678 |
| Sports lighting pad mount transformer - 300KVA/15KV - XM | 0.00 ea | /ea | |
| 265098 Sports Lighting | | /gsf | 34,236 |
| 265600 Exterior Lighting | | | |
| SW05 - Wall Bracket Wallwasher [B] | 91.00 lf | 386.49 /lf | 35,171 |
| SW08 - Linear Forward Throw [B] | 549.00 lf | 133.49 /lf | 73,286 |
| PT01-2: single 4,000LM Type II fixture on 14' pole [B] | 9.00 ea | 2,950.00 /ea | 26,550 |
| PT02-2: single 4,000LM Type II fixture on 14' pole [B] | 43.00 ea | 2,950.00 /ea | 126,850 |
| PT01-3: single 20,000LM Type III fixture on 30' pole [B] | 1.00 ea | 4,358.01 /ea | 4,358 |
| PT01-23: twin back to back 20,000LM Type III fixture on 30' pole [B] | 3.00 ea | 3,714.02 /ea | 11,142 |
| PT02-3: single 4,000LM Type II fixture on 14' pole [B] | 3.00 ea | 2,950.00 /ea | 8,850 |
| PT02-4: single 4,000LMN Type IV fixture on 14' pole [B] | 3.00 ea | 2,950.00 /ea | 8,850 |



| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--|------------------|-----------------|----------------|
| 265600 Exterior Lighting | | | |
| PT02-23: twin back to back 20,000LM Type III fixture on 30' pole [B] | 4.00 ea | 3,714.00 /ea | 14,856 |
| <i>PT03: 12,000LM Type V fixture pedestrian multi-function pylon [B]</i> | <i>0.00 ea</i> | <i>/ea</i> | |
| PT03: 12,000LM Type V fixture pedestrian - no multifunction | 34.00 ea | 3,150.00 /ea | 107,100 |
| RG02: 2,000LM in ground tree uplight [B] | 8.00 ea | 1,803.66 /ea | 14,429 |
| RG01: 2,000LM LED flagpole spot [B] | 4.00 ea | 1,514.21 /ea | 6,057 |
| 3/4" PVC - 20A (2#12 & #12G) | 4,500.00 lf | 8.53 /lf | 38,401 |
| 1" PVC - 30A (3#8 & #10G) | 7,500.00 lf | 11.12 /lf | 83,374 |
| | | /gsf | 559,274 |
| 270001 Voice/Data/CATV | | | |
| Empty conduit (sch 40 PVC) - 1 x 4" [technology] | 350.00 lf | 11.18 /lf | 3,914 |
| Empty conduit (sch 40 PVC) - 4 x 4" [technology] | 380.00 lf | 38.87 /lf | 14,771 |
| Communications utility pole conduit riser (GRC - 4"C) | 10.00 ea | 2,705.64 /ea | 27,056 |
| Telecom handhole and cover - 4' x 4' | 3.00 ea | 1,639.44 /ea | 4,918 |
| | | /gsf | 50,659 |
| 282000 Video Surveillance | | | |
| Exterior camera - 180 deg (WP housings / PoE Injectors / fiber converters) | 3.00 ea | 2,278.25 /ea | 6,835 |
| Exterior camera - 270 deg (WP housings / PoE Injectors / fiber converters) | 12.00 ea | 2,778.25 /ea | 33,339 |
| Exterior camera - fixed (WP housings / PoE Injectors / fiber converters) | 5.00 ea | 2,078.25 /ea | 10,391 |
| Video surveillance cable (EMT) | 3,425.00 lf | 9.91 /lf | 33,956 |
| | | /gsf | 84,521 |
| 321319 Footings For PV | | | |
| Concrete footings for PV panels - West parking lot | 1.00 ls | 47,250.00 /ls | 47,250 |
| | | /gsf | 47,250 |
| 321825 Sport Fields | | | |
| Softball field scoreboard | 1.00 ea | 27,957.97 /ea | 27,958 |
| Baseball /soccer combo score board | 1.00 ea | 27,958.05 /ea | 27,958 |
| | | /gsf | 55,916 |
| 336000 Excavation/Bkfl and Lightpole Bases for Electric | | | |
| Excavation / backfill for site lighting - ph 2-4 | 12,000.00 lf | 18.00 /lf | 216,000 |
| Site Derenzo ph 1 elect duct banks and e/b | 1.00 ls | 165,000.00 /ls | 165,000 |
| Excavation / backfill for electrical services to Stadium Toilet Building | 345.00 lf | 27.50 /lf | 9,488 |
| Excavation / backfill for Teleom services | 254.00 lf | 40.00 /lf | 10,160 |
| Excavation / backfill for PV array - West Parking | 600.00 lf | 27.50 /lf | 16,500 |
| Excavation / backfill for PV array - Rear Stadium | 1,000.00 lf | 27.50 /lf | 27,500 |
| Emergency Generator pad | 1.00 ea | 5,000.00 /ea | 5,000 |
| Electric hand hole - 13"W x 24"L x 18" D- Quazite PG3048DA36) | 20.00 ea | 880.00 /ea | 17,600 |
| E/b for electric handholes - ph 2-4 | 4.00 ea | 1,980.00 /ea | 7,920 |
| | | /gsf | 475,168 |
| 336020 Light Pole Bases | | | |
| Light pole bases - precast conc 24" dia. x 20'-0" (Stadium Lights) | 12.00 ea | 20,000.00 /ea | 240,000 |
| Light Pole Bases - precast conc PT1 24" dia. x 6'-0" - ph 1 | 3.00 ea | 1,200.00 /ea | 3,600 |
| Light Bollard Bases - precast conc PT2 24" dia. x 4'-0" - ph 1 | 29.00 ea | 1,200.00 /ea | 34,800 |
| Lightbollard bases - precast conc PT3 24" dia. x ph 1 | 5.00 ea | 950.00 /ea | 4,750 |
| Light Pole Bases - precast conc PT1 24" dia. x 6'-0" - ph 2-4 | 7.00 ea | 1,200.00 /ea | 8,400 |
| Light Pole Bases - precast conc PT2 24" dia. x 4'-0" - ph 2-4 | 26.00 ea | 1,200.00 /ea | 31,200 |
| Light bollard bases - precast conc PT3 24" dia. x ph 2-4 | 14.00 ea | 950.00 /ea | 13,300 |

| Spreadsheet Level | Takeoff Quantity | Total Cost/Unit | Total Amount |
|--------------------------------------|-----------------------|-------------------|-------------------|
| 336020 Light Pole Bases | | /gsf | 336,050 |
| G40 Electrical Utilities | 408,500.00 gsf | 6.84 /gsf | 2,792,687 |
| G40 Site Electrical Utilities | 408,500.00 gsf | 6.84 /gsf | 2,792,687 |
| G Sitework | 408,500.00 gsf | 52.48 /gsf | 21,438,997 |

90% CD Estimate
MSBA Project # 2015-0010-0505

Estimate Totals

| Description | Amount | Totals | Rate | Cost per Unit |
|--|--------------------|--------------------|-------------|----------------------|
| Subtotal | 187,672,531 | 187,672,531 | | 459.419 /SF |
| Non-trade sub bonds | 1,205,090 | | 1.200 % | 2.950 /SF |
| Subtotal | 1,205,090 | 188,877,621 | | 462.369 /SF |
| Phasing | 650,000 | | | 1.591 /SF |
| Design/Estimate Contingency-Awarded Subs | | | | |
| Design & Estimating Contingency - Other | 3,999,006 | | 2.500 % | 9.789 /SF |
| Subtotal | 4,649,006 | 193,526,627 | | 473.749 /SF |
| Escalation - Awarded Subs | | | | |
| Escalation - Other | 7,998,012 | | 5.000 % | 19.579 /SF |
| Subtotal | 7,998,012 | 201,524,639 | | 493.328 /SF |
| General Conditions (C.1-3) | 11,931,225 | | | 29.207 /SF |
| General Requirements (C.5-6) | 4,872,887 | | | 11.929 /SF |
| Covid GR Impact Costs | 600,000 | | | 1.469 /SF |
| P&P Bond | 2,251,695 | | | 5.512 /SF |
| Builder's Risk (NIC) | | | | |
| GL Insurance | 2,588,155 | | | 6.336 /SF |
| Subtotal | 22,243,962 | 223,768,601 | | 547.781 /SF |
| Contractor's Contingency | 5,594,215 | | 2.500 % | 13.695 /SF |
| Fee | 4,705,737 | | | 11.520 /SF |
| Total | | 234,068,553 | | 572.995 /SF |



90% Construction Document Estimate

Arlington High School Arlington, MA

MSBA Project Number: 201500100505

PM&C LLC

20 Downer Avenue, Suite 5
Hingham, MA 02043

(T) 781-740-8007

(F) 781-740-1012

Prepared for:

HMFH

August 17, 2020



Arlington High School

17-Aug-20

Arlington, MA

90% Construction Document Estimate

INTRODUCTION

This 90% Construction Document cost estimate was produced from drawings and specifications, dated July 22, 2020 prepared by HMFH and their design team.

This estimate includes all direct construction costs, construction managers overhead and profit and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under 149a of the Massachusetts General Laws to pre-qualified construction managers, and pre-qualified sub-contractors, open specifications for materials and manufactures.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- All professional fees and insurance
- Building Permit costs
- Removal of existing PV systems
- Removal of contaminated soils
- Rock excavation
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)

Notes per Summary sheets

- ¹ Costs from UEC report dated 4.1.20 (excludes design and monitoring services)



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

MAIN CONSTRUCTION COST SUMMARY

| | | Gross Floor Area | \$/sf | Estimated Construction Cost |
|--|--------|-----------------------------|--------------|--|
| NEW CONSTRUCTION | | | | |
| NEW SCHOOL (School 408,590 + Athletic Toilet Facility 800) | | 409,390 | \$353.35 | \$144,658,055 |
| EARLY BID PACKAGE 2 | | | | \$8,810,430 |
| EARLY BID PACKAGE 3 | | | | \$720,288 |
| EARLY BID PACKAGE 4 | | | | \$18,335,575 |
| Paramenter School Renovation/Swing space costs | | | | Below the Line |
| SITWORK | | | | \$15,978,230 |
| SUB-TOTAL | | 409,390 | \$460.45 | \$188,502,578 |
| DESIGN AND PRICING CONTINGENCY | 2.5% | | | \$4,015,907 |
| PHASING | | | | \$650,000 |
| ESCALATION | | | | |
| Phase 1 - July 1, 2020 Start | 0.00% | | | \$0 |
| Phase 2 - January 1, 2022 Start | 6.80% | | | \$4,664,235 |
| Phase 3 - July 1, 2023 Start | 10.20% | | | \$2,441,350 |
| Phase 4 - July 1, 2024 Start | 12.00% | | | \$1,118,029 |
| SUB-TOTAL | | | | \$201,392,099 |
| NON TRADES SUB BONDS | | | | Included In Rates |
| GENERAL CONDITIONS | | | | \$11,931,225 |
| GENERAL REQUIREMENTS | | | | \$4,872,887 |
| COVID GR IMPACT | | | | \$600,000 |
| BONDS | 0.75% | | | \$2,251,695 |
| INSURANCE | 1.10% | | | \$2,588,155 |
| BUILDERS RISK | | | | by owner |
| PERMIT | | | | NIC |
| SUB-TOTAL | | | | \$223,636,061 |
| OVERHEAD AND FEE | | | | \$4,705,737 |
| GMP CONTINGENCY | 2.5% | | | \$5,590,902 |
| PHASING | | | | Included |
| TOTAL OF ALL CONSTRUCTION | | 409,390 | \$571.42 | \$233,932,700 |

Paramenter School Renovation

EBP #1

\$2,580,810



Arlington High School
Arlington, MA
90% Construction Document Estimate

17-Aug-20

GFA

409,390

REMAINING TRADE/NON-TRADE BIDS

TRADE BIDS

NON TRADE BIDS

NEW SCHOOL BUILDING

DIV. 1 EXISTING CONDITIONS

015200 Trade Support \$908,600

DIV. 2 EXISTING CONDITIONS

024100 Site Demolition \$420,302
024400 Demolition and Abatement

DIV. 3 CONCRETE

030513 Concrete Sealers \$54,655
033000 Cast In Place Concrete \$9,442,834
033650 Polished Concrete \$507,398

DIV. 4 MASONRY

042000 Unit Masonry \$7,093,545

DIV. 5 METALS

051200 Structural Steel Framing \$9,770,065
055000 Metal Fabrications \$2,226,698

DIV. 6 WOODS, PLASTICS & COMPOSITES

061000 Rough Carpentry \$1,200,298
062000 Finish Carpentry \$2,004,280
066400 FRP \$73,500

DIV. 7 THERMAL & MOISTURE PROTECTION

070001 Waterproofing, Dampproofing and Caulking \$2,428,056
070002 Roofing \$2,828,740
072100 Thermal Insulation \$183,527
074200 Metal Wall Panels \$1,651,973
075419 PVC Roofing
078100 Applied Fireproofing \$1,021,050
078400 Firestopping \$75,000
079513 Construction & Expansion Joints \$185,760

DIV. 8 DOORS & WINDOWS

080001 Aluminum Windows \$6,180,045
080002 Glazing \$901,448
081113 Doors, Frames and Hardware \$1,784,825
083100 Access Doors and Panels \$20,000
083300 Overhead Doors \$81,221
084413 Glazed Aluminum Curtainwall \$308,060
086300 Metal Framed Skylights \$226,868
089000 Louvers and Vents \$60,000

DIV. 9 FINISHES

090002 Tile \$1,459,954
090003 Acoustical Tile \$3,135,178
090005 Resilient Flooring \$1,518,691
090007 Painting \$1,440,047
092900 GWB, Lath and Plastering \$13,486,806
096466 Wood Athletic Flooring \$690,792
096625 Precast Terrazzo \$47,875
096700 Fluid Applied Floor \$187,993



Arlington High School
Arlington, MA
90% Construction Document Estimate

17-Aug-20

GFA

409,390

REMAINING TRADE/NON-TRADE BIDS

TRADE BIDS

NON TRADE BIDS

NEW SCHOOL BUILDING

| | |
|------------------------|-----------|
| 096800 Carpet | \$270,049 |
| 098414 Acoustic Panels | \$789,500 |

DIV. 10 SPECIALTIES

| | |
|---|-----------|
| 101100 Markerboards | \$375,820 |
| 101400 Signage | \$353,970 |
| 101500 Photoluminescent Safety Markings | \$74,400 |
| 102113 Toilet Compartments | \$170,050 |
| 102228 Folding Partition | \$47,600 |
| 102813 Toilet Accessories | \$158,790 |
| 104400 Fire Protection Specialties | \$48,300 |
| 105113 Metal Lockers | \$696,950 |
| 107113 Sun Control Devices | |

DIV. 11 EQUIPMENT

| | |
|--------------------------------|-----------|
| 111300 Loading Dock Equipment | \$5,000 |
| 114000 Foodservice Equipment | \$700,848 |
| 114500 Appliances | \$144,600 |
| 116000 Laboratory Equipment | \$227,500 |
| 116100 Theatre Equipment | \$844,080 |
| 116623 Gymnasium Equipment | \$428,660 |
| 119000 Miscellaneous Equipment | \$5,000 |

DIV. 12 FURNISHINGS

| | |
|---------------------------------------|-------------|
| 122400 Window Shades | \$265,402 |
| 123000 Casework | \$2,113,850 |
| 124813 Entrance Floor Mats and Frames | \$66,300 |
| 126100 Fixed Audience Seating | \$331,650 |
| 126613 Telescoping Bleachers | \$344,700 |

DIV. 13 SPECIAL CONSTRUCTION

| | |
|-----------------------|-------------|
| 130000 Temporary Work | \$2,343,141 |
|-----------------------|-------------|

DIV. 14 CONVEYING SYSTEMS

| | |
|--|------------------|
| 142424 Holeless Hydraulic Elevators | \$680,000 |
|--|------------------|

DIV. 21 FIRE SUPPRESSION

| | |
|--------------------------------|--------------------|
| 210000 Fire Suppression | \$2,857,980 |
|--------------------------------|--------------------|

DIV. 22 PLUMBING

| | |
|------------------------|--------------------|
| 220000 Plumbing | \$5,294,370 |
|------------------------|--------------------|

DIV. 23 HVAC

| | |
|--------------------|---------------------|
| 230000 HVAC | \$28,072,942 |
|--------------------|---------------------|

DIV. 26 ELECTRICAL

| | |
|--|---------------------|
| 260000 Electrical | \$21,280,905 |
| 270000 Communications | |
| 280000 Electronic Safety and Equipment | |

DIV. 31 EARTHWORK

| | |
|------------------------------------|-------------|
| 311000 Site Preparation & Clearing | \$583,300 |
| 312000 Earthwork | \$5,461,054 |
| 312115 Sub-slab Ventilation System | |



Arlington High School
Arlington, MA
90% Construction Document Estimate

17-Aug-20

GFA 409,390

REMAINING TRADE/NON-TRADE BIDS

TRADE BIDS

NON TRADE BIDS

NEW SCHOOL BUILDING

| | | |
|--------|---|-------------|
| 312500 | Erosion Control | \$166,000 |
| 315000 | Temporary Excavation Support and Protection | |
| 316213 | PIFs | \$2,777,079 |
| 316615 | Helical Piles | \$84,000 |
| 316616 | Permanent Soldier Pile Wall | |
| 316700 | Rigid Inclusions | |

DIV. 32 EXTERIOR IMPROVEMENTS

| | | |
|--------|---------------------------|-------------|
| 320000 | Paving, curbing & Edging | \$1,524,450 |
| 323119 | Site Improvements | \$2,185,705 |
| 321800 | Synthetic Field Surfacing | \$1,823,920 |
| 329900 | Landscaping | \$1,186,402 |

DIV. 33 UTILITIES

| | | |
|--------|------------------------|-------------|
| 330000 | Enabling Utilities | |
| 331000 | Water Distribution | \$212,790 |
| 333000 | Sanitary Sewerage | \$571,475 |
| 334000 | Storm Drainage Systems | \$1,461,669 |

SUBTOTAL DIRECT (TRADE) COST

\$87,398,599

\$73,237,686



Arlington High School
Arlington, MA
90% Construction Document Estimate

17-Aug-20

GFA 409,390

| CONSTRUCTION COST SUMMARY IN CSI FORMAT | | | | | | | | | | | | | | |
|---|--|-----------------|--------------|-----------|-----------|-------------|-------|----------|-------|-------------|-------------|---------------|--------------|-----------|
| NEW SCHOOL | | TOILET FACILITY | | SITEWORK | | EBP #2 | | EBP #3 | | EBP #4 | | TOTAL PROJECT | | |
| Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | |
| NEW SCHOOL BUILDING | | | | | | | | | | | | | | |
| DIV. 1 EXISTING CONDITIONS | | | \$908,600 | | | | | | | | | | | \$908,600 |
| 015200 | Trade Support | \$908,600 | | | | | | | | | | \$908,600 | | |
| DIV. 2 EXISTING CONDITIONS | | | | | \$420,302 | \$420,302 | | \$52,500 | | \$6,891,075 | | \$420,302 | \$7,363,877 | |
| 024100 | Site Demolition | | | | \$420,302 | | | \$52,500 | | \$6,891,075 | | \$420,302 | \$6,943,575 | |
| 024400 | Demolition and Abatement | | | | | | | | | | | | | |
| DIV. 3 CONCRETE | | | \$8,542,657 | | \$56,520 | \$1,405,710 | | \$18,100 | | \$3,830,000 | | \$54,655 | \$13,852,987 | |
| 030513 | Concrete Sealers | \$53,525 | | \$1,130 | | | | | | | | \$54,655 | | |
| 033000 | Cast In Place Concrete | \$7,981,734 | | \$55,390 | | \$1,405,710 | | \$18,100 | | \$3,830,000 | | \$13,290,934 | | |
| 033650 | Polished Concrete | \$507,398 | | | | | | | | | | \$507,398 | | |
| DIV. 4 MASONRY | | | \$6,945,361 | | \$148,184 | \$148,184 | | | | | | \$7,093,545 | \$7,093,545 | |
| 042000 | Unit Masonry | \$6,945,361 | | \$148,184 | | | | | | | | \$7,093,545 | | |
| DIV. 5 METALS | | | \$11,993,883 | | \$2,880 | | | | | \$7,260,500 | \$7,260,500 | \$17,030,565 | \$19,257,263 | |
| 051200 | Structural Steel Framing | \$9,770,065 | | | | | | | | \$7,260,500 | | \$17,030,565 | | |
| 055000 | Metal Fabrications | \$2,223,818 | | \$2,880 | | | | | | | | \$2,226,698 | | |
| DIV. 6 WOODS, PLASTICS & COMPOSITES | | | \$3,260,958 | | \$17,120 | | | \$12,760 | | \$354,000 | \$354,000 | \$1,554,298 | \$3,644,838 | |
| 061000 | Rough Carpentry | \$1,183,178 | | \$17,120 | | | | | | | | \$1,554,298 | | |
| 062000 | Finish Carpentry | \$2,004,280 | | | | | | \$12,760 | | \$354,000 | | \$2,017,040 | | |
| 066400 | FRP | \$73,500 | | | | | | | | | | \$73,500 | | |
| DIV. 7 THERMAL & MOISTURE PROTECTION | | | \$8,338,374 | | \$35,732 | | | | | | | \$2,428,056 | \$8,374,106 | |
| 070001 | Waterproofing, Dampproofing and Caulking | \$2,411,284 | | \$16,772 | | | | | | | | \$2,428,056 | | |
| 070002 | Roofing | \$2,815,540 | | \$13,200 | | | | | | | | \$2,828,740 | | |
| 072100 | Thermal Insulation | \$177,767 | | \$5,760 | | | | | | | | \$183,527 | | |
| 074200 | Metal Wall Panels | \$1,651,973 | | | | | | | | | | \$1,651,973 | | |
| 075419 | PVC Roofing | | | | | | | | | | | | | |
| 078100 | Applied Fireproofing | \$1,021,050 | | | | | | | | | | \$1,021,050 | | |
| 078400 | Firestopping | \$75,000 | | | | | | | | | | \$75,000 | | |
| 079513 | Construction & Expansion Joints | \$185,760 | | | | | | | | | | \$185,760 | | |
| DIV. 8 DOORS & WINDOWS | | | \$9,550,067 | | \$12,400 | | | | | \$43,260 | | \$6,180,045 | \$9,605,727 | |
| 080001 | Aluminum Windows | \$6,180,045 | | | | | | | | | | \$6,180,045 | | |
| 080002 | Glazing | \$901,448 | | | | | | \$9,000 | | | | \$910,448 | | |
| 081113 | Doors, Frames and Hardware | \$1,777,625 | | \$7,200 | | | | \$34,260 | | | | \$1,819,085 | | |
| 083100 | Access Doors and Panels | \$20,000 | | | | | | | | | | \$20,000 | | |
| 083300 | Overhead Doors | \$76,021 | | \$5,200 | | | | | | | | \$81,221 | | |
| 084413 | Glazed Aluminum Curtainwall | \$308,060 | | | | | | | | | | \$308,060 | | |
| 086300 | Metal Framed Skylights | \$226,868 | | | | | | | | | | \$226,868 | | |
| 089000 | Louvers and Vents | \$60,000 | | | | | | | | | | \$60,000 | | |
| DIV. 9 FINISHES | | | \$23,010,655 | | \$16,230 | | | | | \$153,590 | | \$14,559,954 | \$23,180,475 | |
| 090002 | Tile | \$1,459,954 | | | | | | | | | | \$1,459,954 | | |
| 090003 | Acoustical Tile | \$3,135,178 | | | | | | \$2,700 | | | | \$3,137,878 | | |
| 090005 | Resilient Flooring | \$1,518,691 | | | | | | \$33,990 | | | | \$1,552,681 | | |
| 090007 | Painting | \$1,432,292 | | \$7,755 | | | | \$37,800 | | | | \$1,477,847 | | |
| 092900 | GWB, Lath and Plastering | \$13,478,331 | | \$8,475 | | | | \$79,100 | | | | \$13,565,906 | | |
| 096466 | Wood Athletic Flooring | \$690,792 | | | | | | | | | | \$690,792 | | |
| 096625 | Precast Terrazzo | \$47,875 | | | | | | | | | | \$47,875 | | |
| 096700 | Fluid Applied Floor | \$187,993 | | | | | | | | | | \$187,993 | | |
| 096800 | Carpet | \$270,049 | | | | | | | | | | \$270,049 | | |
| 098414 | Acoustic Panels | \$789,500 | | | | | | | | | | \$789,500 | | |
| DIV. 10 SPECIALTIES | | | \$1,894,390 | | \$31,490 | | | | | \$29,308 | \$29,308 | \$405,128 | \$1,955,188 | |
| 101100 | Markerboards | \$375,820 | | | | | | | | | | \$405,128 | | |
| 101400 | Signage | \$342,220 | | \$11,750 | | | | | | | | \$353,970 | | |
| 101500 | Photoluminescent Safety Markings | \$74,400 | | | | | | | | | | \$74,400 | | |
| 102113 | Toilet Compartments | \$159,400 | | \$10,650 | | | | | | | | \$170,050 | | |
| 102228 | Folding Partition | \$47,600 | | | | | | | | | | \$47,600 | | |
| 102813 | Toilet Accessories | \$150,400 | | \$8,390 | | | | | | | | \$158,790 | | |
| 104400 | Fire Protection Specialties | \$47,600 | | \$700 | | | | | | | | \$48,300 | | |
| 105113 | Metal Lockers | \$696,950 | | | | | | | | | | \$696,950 | | |
| 107113 | Sun Control Devices | | | | | | | | | | | | | |
| DIV. 11 EQUIPMENT | | | \$2,355,688 | | | | | | | | | \$5,000 | \$2,355,688 | |
| 111300 | Loading Dock Equipment | \$5,000 | | | | | | | | | | \$5,000 | | |
| 114000 | Foodservice Equipment | \$700,848 | | | | | | | | | | \$700,848 | | |
| 114500 | Appliances | | | | | | | | | | | \$144,600 | | |
| 116000 | Laboratory Equipment | \$227,500 | | | | | | | | | | \$227,500 | | |
| 116100 | Theatre Equipment | \$844,080 | | | | | | | | | | \$844,080 | | |
| 116623 | Gymnasium Equipment | \$428,660 | | | | | | | | | | \$428,660 | | |
| 119000 | Miscellaneous Equipment | \$5,000 | | | | | | | | | | \$5,000 | | |
| DIV. 12 FURNISHINGS | | | \$3,121,902 | | | | | | | | | | \$3,121,902 | |



Arlington High School
Arlington, MA
90% Construction Document Estimate

17-Aug-20

GFA 409,390

| CONSTRUCTION COST SUMMARY IN CSI FORMAT | | | | | | | | | | | | | | | |
|---|---|------------|---------------|-----------------|-----------|-------------|--------------|-------------|-------------|-----------|-----------|----------|--------------|---------------|---------------|
| | | NEW SCHOOL | | TOILET FACILITY | | SITEWORK | | EBP #2 | | EBP #3 | | EBP #4 | | TOTAL PROJECT | |
| | | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total | Subtotal | Total |
| NEW SCHOOL BUILDING | | | | | | | | | | | | | | | |
| 122400 | Window Shades | | \$265,402 | | | | | | | | | | | \$265,402 | |
| 123000 | Casework | | \$2,113,850 | | | | | | | | | | | \$2,113,850 | |
| 124813 | Entrance Floor Mats and Frames | | \$66,300 | | | | | | | | | | | \$66,300 | |
| 126100 | Fixed Audience Seating | | \$331,650 | | | | | | | | | | | \$331,650 | |
| 126613 | Telescoping Bleachers | | \$344,700 | | | | | | | | | | | \$344,700 | |
| DIV. 13 SPECIAL CONSTRUCTION | | | \$2,343,141 | | | | | | | | | | | | \$2,343,141 |
| 130000 | Temporary Work | | \$2,343,141 | | | | | | | | | | | \$2,343,141 | |
| DIV. 14 CONVEYING SYSTEMS | | | \$680,000 | | | | | | | | | | | | \$680,000 |
| 142424 | Holeless Hydraulic Elevators | | \$680,000 | | | | | | | | | | | \$680,000 | |
| DIV. 21 FIRE SUPPRESSION | | | \$2,857,980 | | | | | \$125,000 | \$125,000 | | | | | \$2,982,980 | \$2,982,980 |
| 210000 | Fire Suppression | | \$2,857,980 | | | | | | | | | | | | |
| DIV. 22 PLUMBING | | | \$5,194,484 | | \$99,886 | \$99,886 | | \$118,900 | \$118,900 | \$48,880 | \$48,880 | | | \$5,462,150 | \$5,462,150 |
| 220000 | Plumbing | | \$5,194,484 | \$99,886 | | | | \$118,900 | | \$48,880 | | | | \$5,462,150 | |
| DIV. 23 HVAC | | | \$28,039,442 | | \$33,500 | \$33,500 | | | | \$167,000 | \$167,000 | | | \$28,239,942 | \$28,239,942 |
| 230000 | HVAC | | \$28,039,442 | \$33,500 | | | | | | \$167,000 | | | | \$28,239,942 | |
| DIV. 26 ELECTRICAL | | | \$19,714,937 | | \$143,077 | \$143,077 | \$1,422,891 | \$187,200 | \$187,200 | \$194,890 | \$194,890 | | | \$18,150,275 | \$21,662,995 |
| 260000 | Electrical | | \$16,202,217 | | | | | | | | | | | \$18,150,275 | |
| 270000 | Communications | | \$2,200,079 | \$143,077 | | \$1,422,891 | | \$187,200 | | \$194,890 | | | | \$2,200,079 | |
| 280000 | Electronic Safety and Equipment | | \$1,312,641 | | | | | | | | | | | \$1,312,641 | |
| DIV. 31 EARTHWORK | | | \$5,216,182 | | \$92,335 | \$92,335 | \$3,762,916 | \$8,379,330 | \$8,379,330 | | | | | \$767,630 | \$17,450,763 |
| 311000 | Site Preparation & Clearing | | | | | \$583,300 | | \$184,330 | | | | | | \$767,630 | |
| 312000 | Earthwork | | \$2,439,103 | \$8,335 | | \$3,013,616 | | \$8,195,000 | | | | | | \$13,656,054 | |
| 312115 | Sub-slab Ventilation System | | | | | | | | | | | | | | |
| 312500 | Erosion Control | | | | | \$166,000 | | | | | | | | \$166,000 | |
| 315000 | Temporary Excavation Support and Protection | | | | | | | | | | | | | | |
| 316213 | PIFs | | \$2,777,079 | | | | | | | | | | | \$2,777,079 | |
| 316615 | Helical Piles | | | \$84,000 | | | | | | | | | | \$84,000 | |
| 316616 | Permanent Soldier Pile Wall | | | | | | | | | | | | | | |
| 316700 | Rigid Inclusions | | | | | | | | | | | | | | |
| DIV. 32 EXTERIOR IMPROVEMENTS | | | | | | | \$6,720,477 | | \$6,720,477 | | | | | | \$6,720,477 |
| 320000 | Paving, curbing & Edging | | | | | \$1,524,450 | | | | | | | | \$1,524,450 | |
| 323119 | Site Improvements | | | | | \$2,185,705 | | | | | | | | \$2,185,705 | |
| 321800 | Synthetic Field Surfacing | | | | | \$1,823,920 | | | | | | | | \$1,823,920 | |
| 329900 | Landscaping | | | | | \$1,186,402 | | | | | | | | \$1,186,402 | |
| DIV. 33 UTILITIES | | | | | | | \$2,245,934 | | \$2,245,934 | | | | | | \$2,245,934 |
| 330000 | Enabling Utilities | | | | | | | | | | | | | | |
| 331000 | Water Distribution | | | | | \$212,790 | | | | | | | | \$212,790 | |
| 333000 | Sanitary Sewerage | | | | | \$571,475 | | | | | | | | \$571,475 | |
| 334000 | Storm Drainage Systems | | | | | \$1,461,669 | | | | | | | | \$1,461,669 | |
| SUBTOTAL DIRECT (TRADE) COST | | | \$143,968,701 | | \$689,354 | | \$15,978,230 | | \$8,810,430 | | \$720,288 | | \$18,335,575 | | \$188,502,578 |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

Building
Toilet Facility

GFA
GFA

408,390
800
409,390

| CONSTRUCTION COST SUMMARY | | | | | | | | | |
|---|--------------|--|-----------|--|-------------|--|-------------|--------------|---------------|
| BUILDING SYSTEM | SUB-TOTAL | | SUB-TOTAL | | SUB-TOTAL | | SUB-TOTAL | | TOTAL |
| | | | | | | | | | \$/SF |
| | | | | | | | | | % |
| NEW CONSTRUCTION INCLUDING STADIUM TOILET FACILITY | | | | | | | | | |
| A10 FOUNDATIONS | | | | | | | | | |
| A1010 Standard Foundations | \$4,058,485 | | \$41,357 | | \$960,000 | | \$1,900,000 | | |
| A1020 Special Foundations | \$2,979,079 | | \$84,000 | | \$2,991,000 | | \$300,000 | | |
| A1030 Lowest Floor Construction | \$4,745,916 | | \$22,368 | | \$275,000 | | \$580,000 | \$18,937,205 | \$46.26 11.2% |
| A20 BASEMENT CONSTRUCTION | | | | | | | | | |
| A2010 Basement Excavation | \$0 | | | | | | | \$0 | \$0.00 0.0% |
| A2020 Basement Walls | \$0 | | | | | | | | |
| B10 SUPERSTRUCTURE | | | | | | | | | |
| B1010 Upper Floor Construction | \$11,502,969 | | \$0 | | | | \$7,980,500 | | |
| B1020 Roof Construction | \$1,039,815 | | \$14,400 | | | | \$270,000 | \$20,807,684 | \$50.83 12.4% |
| B20 EXTERIOR CLOSURE | | | | | | | | | |
| B2010 Exterior Walls | \$13,057,321 | | \$137,510 | | | | | | |
| B2020 Windows | \$6,208,500 | | \$0 | | | | | | |
| B2030 Exterior Doors | \$348,514 | | \$5,452 | | | | | \$19,757,297 | \$48.26 11.7% |
| B30 ROOFING | | | | | | | | | |
| B3010 Roof Coverings | \$3,125,640 | | \$16,560 | | | | | | |
| B3020 Roof Openings | \$327,238 | | \$0 | | | | | \$3,469,438 | \$8.47 2.1% |
| C10 INTERIOR CONSTRUCTION | | | | | | | | | |
| C1010 Partitions | \$11,873,180 | | \$46,424 | | | | | | |
| C1020 Interior Doors | \$2,357,312 | | \$8,520 | | | | | | |
| C1030 Specialties/Millwork | \$3,937,212 | | \$19,740 | | | | | \$18,242,388 | \$44.56 10.8% |
| C20 STAIRCASES | | | | | | | | | |
| C2010 Stair Construction | \$966,200 | | \$0 | | | | \$60,000 | | |
| C2020 Stair Finishes | \$410,145 | | \$0 | | | | | \$1,436,345 | \$3.51 0.9% |
| C30 INTERIOR FINISHES | | | | | | | | | |
| C3010 Wall Finishes | \$3,844,724 | | \$6,390 | | | | | | |
| C3020 Floor Finishes | \$3,543,308 | | \$1,130 | | | | | | |
| C3030 Ceiling Finishes | \$5,335,569 | | \$9,040 | | | | | \$12,740,161 | \$31.12 7.6% |
| D10 CONVEYING SYSTEMS | | | | | | | | | |
| D1010 Elevator | \$680,000 | | \$0 | | | | | \$680,000 | \$1.66 0.4% |
| D20 PLUMBING | | | | | | | | | |
| D20 Plumbing | \$5,016,834 | | \$99,886 | | \$118,900 | | | \$5,235,620 | \$12.79 3.1% |
| D30 HVAC | | | | | | | | | |
| D30 HVAC | \$27,601,992 | | \$33,500 | | | | | \$27,635,492 | \$67.50 16.4% |
| D40 FIRE PROTECTION | | | | | | | | | |
| D40 Fire Protection | \$2,709,980 | | \$0 | | \$125,000 | | | \$2,834,980 | \$6.92 1.7% |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

Building
Toilet Facility

GFA
GFA
408,390
800
409,390

| CONSTRUCTION COST SUMMARY | | | | | | | | |
|---|----------------------|------------------------|---------------------|--------------------|------------------|---------------------|----------------------|-----------------|
| BUILDING SYSTEM | SUB-TOTAL | | | SUB-TOTAL | SUB-TOTAL | SUB-TOTAL | TOTAL | \$/SF |
| | | | | | | | | % |
| NEW CONSTRUCTION INCLUDING STADIUM TOILET FACILITY | BUILDING | TOILET FACILITY | SITWORK | EBP #2 | EBP #3 | EBP #4 | | |
| D50 ELECTRICAL | | | | | | | | |
| D5010 Complete System | \$19,564,937 | \$143,077 | | | | | \$19,708,014 | \$48.14 11.7% |
| E10 EQUIPMENT | | | | | | | | |
| E10 Equipment | \$3,032,038 | \$0 | | | | | \$3,032,038 | \$7.41 1.8% |
| E20 FURNISHINGS | | | | | | | | |
| E2010 Fixed Furnishings | \$2,445,552 | \$0 | | | | | | |
| E2020 Movable Furnishings | NIC | | | | | | \$2,445,552 | \$5.97 1.5% |
| F10 SPECIAL CONSTRUCTION | | | | | | | | |
| F10 Special Construction | \$3,256,241 | \$0 | | \$184,330 | \$720,288 | \$354,000 | \$4,514,859 | \$11.05 2.7% |
| F20 HAZMAT REMOVALS | | | | | | | | |
| F2010 Building Elements Demolition | \$0 | \$0 | | | | | \$3,027,125 | |
| F2020 Hazardous Components Abatement | \$0 | \$0 | | | | | \$3,863,950 | \$16.87 4.1% |
| TOTAL DIRECT BUILDING COST (Trade Costs) | \$143,968,701 | \$689,354 | \$0 | \$4,654,230 | \$720,288 | \$18,335,575 | \$168,368,148 | \$412.07 100.0% |
| G10 | | | \$4,101,652 | \$1,302,000 | | | \$5,403,652 | |
| G20 | | | \$9,088,413 | \$147,000 | | | \$9,235,413 | |
| G30 | | | \$1,048,624 | \$2,355,000 | | | \$3,403,624 | |
| G40 | | | \$1,710,341 | \$352,200 | | | \$2,062,541 | |
| TOTAL DIRECT SITE COST (Trade Costs) | \$0 | \$0 | \$15,949,030 | \$4,156,200 | \$0 | \$0 | \$20,105,230 | \$49.21 11.9% |
| TOTAL DIRECT SITE COST (Trade Costs) | \$143,968,701 | \$689,354 | \$15,949,030 | \$8,810,430 | \$720,288 | \$18,335,575 | \$188,473,378 | \$461.28 111.9% |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

GROSS FLOOR AREA CALCULATION

| | |
|--------------|---------|
| Ground Floor | 81,020 |
| First Floor | 14,410 |
| Second Floor | 131,370 |
| Third floor | 74,570 |
| Fourth floor | 58,750 |
| Fifth floor | 48,020 |
| Roof | 460 |

TOTAL GROSS FLOOR AREA (GFA)

408,600 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

033000 CONCRETE

| | | |
|---------------------------------|-------|------|
| Continuous Footings/Grade Beams | 991 | CY |
| Foundation Walls | 68 | CY |
| Retaining Walls | 856 | CY |
| Spread Footings | 29 | CY |
| Pile Caps | 1,225 | CY |
| Structural Slabs | 3,311 | CY |
| Slab Thickening | 1,013 | CY |
| Total Foundation Concrete | 7,493 | CY |
| Total Rebar | 784 | tons |

PHASE 1

EBP #4

PHASES 2 + 3

Grade Beams

| | | | | |
|-----------------------------|---------|------|--------|---------|
| Formwork | 22,152 | sf | 15.00 | 332,280 |
| Re-bar | 437,564 | lbs. | 1.50 | 656,346 |
| Concrete material; 4000 psi | 883 | cy | 148.00 | 130,684 |
| Placing concrete | 883 | cy | 120.00 | 105,960 |

Retaining walls

| | | | | |
|-----------------------------|---------|------|--------|---------|
| Formwork | 22,030 | sf | 20.00 | 440,600 |
| Re-bar | 126,673 | lbs. | 1.50 | 190,010 |
| Concrete material; 4000 psi | 856 | cy | 148.00 | 126,688 |
| Placing concrete | 856 | cy | 120.00 | 102,720 |
| Form shelf | 400 | lf | 10.00 | 4,000 |

Pile Caps

| | | | | |
|-------------------------------|---------|------|--------|---------|
| Formwork | 22,387 | sf | 18.00 | 402,966 |
| Re-bar | 133,886 | lbs. | 1.50 | 200,829 |
| Concrete material; 4,000 psi | 1,225 | cy | 148.00 | 181,300 |
| Placing concrete | 1,225 | cy | 120.00 | 147,000 |
| Set anchor bolts grout plates | 253 | ea | 165.00 | 41,745 |

Spread Footings

| | | | | |
|-------------------------------|-------|------|--------|--------|
| Formwork | 363 | sf | 18.00 | EBP #4 |
| Re-bar | 2,634 | lbs. | 1.50 | EBP #4 |
| Concrete material; 4,000 psi | 29 | cy | 148.00 | EBP #4 |
| Placing concrete | 29 | cy | 120.00 | EBP #4 |
| Set anchor bolts grout plates | 5 | ea | 165.00 | EBP #4 |

Strip Footings @ Phases 2/3

| | | | | |
|------------------------------|-------|------|--------|--------|
| Formwork | 580 | sf | 15.00 | 8,700 |
| Re-bar | 1,450 | lbs. | 1.50 | 2,175 |
| Concrete material; 4,000 psi | 79 | cy | 148.00 | 11,692 |
| Placing concrete | 79 | cy | 120.00 | 9,480 |

Foundation walls

| | | | | |
|------------------------------|-------|------|--------|--------|
| Formwork | 3,480 | sf | 20.00 | 69,600 |
| Re-bar | 7,830 | lbs. | 1.50 | 11,745 |
| Concrete material; 4,000 psi | 68 | cy | 148.00 | 10,064 |
| Placing concrete | 68 | cy | 120.00 | 8,160 |

070001 WATERPROOFING, DAMPPROOFING AND CAULKING

| | | | | |
|--|--------|----|------|-----------|
| Waterproofing at retaining wall | 11,015 | sf | 8.50 | 93,628 |
| Waterproofing at plaza deck | | | | w/roofing |
| Dampproofing foundation wall and footing | | | | NR |

072100 THERMAL INSULATION

| | | | | |
|--------------------------------|--------|----|------|--------|
| Insulation at foundation walls | 16,915 | sf | 3.00 | 50,745 |
|--------------------------------|--------|----|------|--------|

312000 EARTHWORK



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

Assumed below excavation is in clean fill

PHASE 1

Strip Footings/Grade Beams

| | | | | | |
|---------------------------------|--|--|--|--|----------|
| Excavation | | | | | w/ EBP#2 |
| Store on site | | | | | w/ EBP#2 |
| Backfill with existing material | | | | | w/ EBP#2 |
| Spread footings | | | | | |
| Excavation | | | | | w/ EBP#2 |
| Store on site | | | | | w/ EBP#2 |
| Backfill with existing material | | | | | w/ EBP#2 |
| Dewatering for foundation work | | | | | w/ EBP#2 |

PHASES 2 + 3

Grade Beams/Strip Footings

| | | | | | |
|---------------------------------|-------|----|-------|---------|--|
| Excavation | 3,621 | cy | 25.00 | 90,525 | |
| Store on site | 3,621 | cy | 12.00 | 43,452 | |
| Backfill with existing material | 2,591 | cy | 16.00 | 41,456 | |
| Retaining walls | | | | | |
| Excavation | 4,630 | cy | 22.00 | 101,860 | |
| Store on site | 4,630 | cy | 12.00 | 55,560 | |
| Backfill with existing material | 3,774 | cy | 16.00 | 60,384 | |
| Pile Caps | | | | | |
| Excavation | 3,543 | cy | 25.00 | 88,575 | |
| Store on site | 3,543 | cy | 12.00 | 42,516 | |
| Backfill with existing material | 2,318 | cy | 16.00 | 37,088 | |

| | | | | | |
|------------------------------------|-----|----|------------|---------|-----------|
| Perimeter drain at retaining walls | 748 | lf | 24.00 | 17,952 | |
| Dewatering for foundation work | 1 | ls | 140,000.00 | 140,000 | |
| SUBTOTAL | | | | | 4,058,485 |

A1020 SPECIAL FOUNDATIONS

| | | | | | |
|---|-----|----|----------|---------|----------|
| Excavation | | | | | w/ EBP#2 |
| Store on site | | | | | w/ EBP#2 |
| Backfill with existing material | | | | | w/ EBP#2 |
| Concrete Deadman; 3 x 8 x 470 lf | | | | | w/ EBP#4 |
| SOE between SP 1 and 23 | | | | | |
| Excavation; 3ft dia at SP | | | | | w/ EBP#2 |
| Allowance for disposal | | | | | w/ EBP#2 |
| Backfill with lean concrete | | | | | w/ EBP#2 |
| Backfill with flowable fill | | | | | w/ EBP#2 |
| SP and lagging | | | | | w/ EBP#2 |
| Tieback | | | | | w/ EBP#2 |
| Premium for location of existing building | | | | | w/ EBP#2 |
| SOE between SP 24 and 66 | | | | | |
| Excavation; 3ft dia at SP | | | | | w/ EBP#2 |
| Allowance for disposal | | | | | w/ EBP#2 |
| Backfill with lean concrete | | | | | w/ EBP#2 |
| Backfill with flowable fill | | | | | w/ EBP#2 |
| SP and lagging | | | | | w/ EBP#2 |
| Tieback | | | | | w/ EBP#2 |
| Exposed concrete permanent face with finish | | | | | w/ EBP#2 |
| SOE, after Phase 1 | 101 | cy | 2,000.00 | 202,000 | |

PHASE 1

| | | | | | |
|--|--|--|--|--|----------|
| RAPS foundation; includes rigid inclusions | | | | | w/ EBP#2 |
| RAPS foundation | | | | | w/ EBP#2 |
| RAPS foundation (future expansion) | | | | | w/ EBP#2 |

PHASES 2 + 3

| | | | | | |
|---|-----|-----|------------|-----------|------|
| Pile foundation | | | | | |
| Mobilization | | | | | INCL |
| Load & Tension testing | | | | | INCL |
| PIFS; 120 T; assumed 30 FT deep; at pile caps | 531 | loc | 3,600.00 | 1,911,600 | |
| Obstructions, allow | 1 | ls | 100,000.00 | 100,000 | |

| | | | | | |
|---|---------|----|------|---------|-----------|
| Piping for mitigation system; flat vent | 144,430 | sf | 0.80 | 115,544 | |
| Vapor intrusion membrane, min 40-mil fluid applied HDPE | 144,430 | sf | 4.50 | 649,935 | |
| SUBTOTAL | | | | | 2,979,079 |

A1030 LOWEST FLOOR CONSTRUCTION

033000 CONCRETE



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--|---------|-----|------------|----------|--------|--|
| 147 | <u>Structural slab on grade, 10" thick</u> | 24,750 | sf | | | | |
| 148 | Formwork | 1,741 | sf | 12.00 | 20,892 | | |
| 149 | Rebar | 210,375 | lbs | 1.50 | 315,563 | | |
| 150 | Concrete - 10" thick | 799 | cy | 148.00 | 118,252 | | |
| 151 | Placing concrete | 799 | cy | 90.00 | 71,910 | | |
| 152 | Finishing and curing concrete | 24,750 | sf | 2.00 | 49,500 | | |
| 153 | <u>Structural slab on grade, 12" thick</u> | 59,605 | sf | | | | |
| 154 | Formwork | 1,741 | sf | 12.00 | 20,892 | | |
| 155 | Rebar | 506,643 | lbs | 1.50 | 759,965 | | |
| 156 | Concrete - 12" thick | 2,318 | cy | 148.00 | 343,064 | | |
| 157 | Placing concrete | 2,318 | cy | 90.00 | 208,620 | | |
| 158 | Finishing and curing concrete | 59,605 | sf | 2.00 | 119,210 | | |
| 159 | <u>Slab on grade, 6"</u> | 4,150 | sf | | | | |
| 160 | Rebar reinforcement, #4 @ 12" oc | 6,395 | lbs | 1.50 | 9,593 | | |
| 161 | Concrete - 6" thick | 81 | cy | 148.00 | 11,988 | | |
| 162 | Placing concrete | 81 | cy | 65.00 | 5,265 | | |
| 163 | Finishing and curing concrete | 4,150 | sf | 3.50 | 14,525 | | |
| 164 | Sawcut full depth control joints | 4,150 | sf | 0.22 | 913 | | |
| 165 | <u>Slab on grade, 4" - Crawl Space</u> | 4,500 | sf | | | | |
| 166 | Rebar reinforcement, #4 @ 12" oc | 6,935 | lbs | 1.50 | 10,403 | | |
| 167 | Concrete - 4" thick | 58 | cy | 148.00 | 8,584 | | |
| 168 | Placing concrete | 58 | cy | 65.00 | 3,770 | | |
| 169 | Finishing and curing concrete | 4,500 | sf | 3.50 | 15,750 | | |
| 170 | Sawcut full depth control joints | 4,500 | sf | 0.22 | 990 | | |
| 171 | <u>Slab on grade, 6", Phase 1</u> | | | | | EBP #4 | |
| 172 | <u>Miscellaneous</u> | | | | | | |
| 173 | Thickened slabs at pile locations | 1,013 | cy | 500.00 | 506,500 | | |
| 174 | <u>Loading Area/Courtyard</u> | | | | | | |
| 175 | <u>Structural slab on grade, 12" thick</u> | 2,900 | sf | | | | |
| 176 | Formwork | 255 | sf | 12.00 | 3,060 | | |
| 177 | Rebar | 21,750 | lbs | 1.50 | 32,625 | | |
| 178 | Concrete - 12" thick | 113 | cy | 148.00 | 16,724 | | |
| 179 | Placing concrete | 113 | cy | 90.00 | 10,170 | | |
| 180 | Finishing and curing concrete | 2,900 | sf | 2.00 | 5,800 | | |
| 181 | <u>Structural slab on grade, 10" thick</u> | 3,900 | sf | | | | |
| 182 | Formwork | 420 | sf | 12.00 | 5,040 | | |
| 183 | Rebar | 33,150 | lbs | 1.50 | 49,725 | | |
| 184 | Concrete - 10" thick | 126 | cy | 148.00 | 18,648 | | |
| 185 | Placing concrete | 126 | cy | 90.00 | 11,340 | | |
| 186 | Finishing and curing concrete | 3,900 | sf | 2.00 | 7,800 | | |
| 187 | <u>Miscellaneous</u> | | | | | | |
| 188 | Topping slab for radiant heat | 12,480 | sf | 10.00 | 124,800 | | |
| 189 | Elevator pit | 2 | ea | 30,000.00 | 60,000 | | |
| 190 | Equipment pads | 1 | ls | 20,000.00 | 20,000 | | |
| 191 | Slab depressions | 1 | ls | 30,000.00 | 30,000 | | |
| 192 | | | | | | | |
| 193 | 072100 THERMAL INSULATION | | | | | | |
| 194 | Rigid insulation, 2' at perimeter | 5,720 | sf | 2.50 | 14,300 | | |
| 195 | | | | | | | |
| 196 | 312000 EARTHWORK | | | | | | |
| 197 | <u>Phase one</u> | | | | | | |
| 198 | Cut | 411 | cy | 10.00 | w/ EBP#2 | | |
| 199 | Store on site | 411 | cy | 12.00 | w/ EBP#2 | | |
| 200 | Backfill with existing material | 411 | cy | 16.00 | w/ EBP#2 | | |
| 201 | Fill - common fill material below bldg (per geotech) | 4,089 | cy | 28.00 | w/ EBP#2 | | |
| 202 | <u>Phase Two</u> | | | | | | |
| 203 | Fill- common fill material below bldg (per geotech) | 5,800 | cy | 28.00 | 162,400 | | |
| 204 | <u>Phase Three</u> | | | | | | |
| 205 | Cut | 7,300 | cy | 10.00 | 73,000 | | |
| 206 | Store on site | 7,300 | cy | 12.00 | 87,600 | | |
| 207 | Backfill with existing material | 1,900 | cy | 16.00 | 30,400 | | |
| 208 | | | | | | | |
| 209 | Structural fill below Blackbox (Area E) | 38 | cy | 45.00 | 1,710 | | |
| 210 | Compacted granular fill, 12" at Phases 2 & 3 (Phase 1 with EBP #2) | 3,376 | cy | 45.00 | 151,920 | | |
| 211 | Compacted granular fill, 3" below footings | 1 | ls | 200,000.00 | w/ EBP#2 | | |
| 212 | Compact sub-grade at Phases 2 & 3 (Phase 1 with EBP #2) | 91,155 | sf | 0.55 | 50,135 | | |
| 213 | | | | | | | |
| 214 | Out of sequence work for working platforms | 1 | ls | 100,000.00 | 100,000 | | |
| 215 | E+B for underslab piping at Phases 2 & 3 (Phase 1 with EBP #2) | 5,050 | lf | 25.00 | 126,250 | | |
| 216 | | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--|-------|-----|--------|---------|-----------|--------------|
| 217 | Material Disposal Costs; Quantity from Spec Section 312001 - 80% (20% carried with EBP #2) | | | | | | |
| 218 | Less than RCS-1 | 1,280 | ton | 20.00 | 25,600 | | |
| 219 | Unlined Landfill | 2,560 | ton | 48.00 | 122,880 | | |
| 220 | Unlined Landfill; geothermal drill spoils | | | | NIC | | |
| 221 | Asphalt batch plant | 3,200 | ton | 53.00 | 169,600 | | |
| 222 | Out-of-State Subtitle D Landfill | 1,280 | ton | 88.00 | 112,640 | | |
| 223 | Hazardous | 1,280 | ton | 335.00 | 428,800 | | |
| 224 | Loading costs | 9,600 | ton | 8.00 | 76,800 | | |
| 225 | SUBTOTAL | | | | | 4,745,916 | |
| 226 | | | | | | | |
| 227 | TOTAL - FOUNDATIONS | | | | | | \$11,783,480 |
| 228 | | | | | | | |

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No Work in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No Work in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

\$0

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

12.24 lbs/sf

2,500 tns

033000 CONCRETE

| | | | | | | | |
|-----|--|---------|-----|--------|---------|--|--|
| 248 | WWF reinforcement, 15% lap | 213,785 | sf | 1.10 | 235,164 | | |
| 249 | Concrete topping to metal decking, 6-1/2" thick; normal weight | 3,918 | cy | 148.00 | 579,864 | | |
| 250 | Place and finish concrete | 185,900 | sf | 2.50 | 464,750 | | |
| 251 | Rebar to decks | 55,770 | lbs | 1.32 | 73,616 | | |
| 252 | Premium for tiered seating at Auditorium balcony | | | | EBP #4 | | |
| 253 | Sound isolation slab | 4,375 | sf | 24.00 | EBP #4 | | |
| 254 | Topping slab for radiant heat | 3,090 | sf | 10.00 | 30,900 | | |

051200 STRUCTURAL STEEL FRAMING

| | | | | | | | |
|-----|---|---------|-----|-----------|-----------|--|--|
| 257 | Beams / Columns / Bracing, tonnage provided - Phase 1 | | | | EBP #4 | | |
| 258 | Beams / Columns / Bracing, tonnage provided - Phase 2 & 3 | 2,500 | tns | 3,200.00 | 8,000,000 | | |
| 259 | Premium for HSS, 25% | 625 | tns | 250.00 | Included | | |
| 260 | Metal floor decking; 2" | 185,900 | sf | 4.00 | 743,600 | | |
| 261 | Shear studs | 46,475 | ea | 3.80 | 176,605 | | |
| 262 | Miscellaneous | | | | | | |
| 263 | Moment connections | 189 | ea | 500.00 | 94,500 | | |
| 264 | Allowance for beam penetrations | 1 | ls | 50,000.00 | 50,000 | | |
| 265 | Miscellaneous | | | | | | |
| 266 | Structure to support salvaged facades | 1 | ls | 50,000.00 | 50,000 | | |
| 267 | Premium for structure at Auditorium/Forum Seating | 265 | lf | 180.00 | EBP #4 | | |
| 268 | Premium for catwalk at performing arts | 681 | sf | 60.00 | 40,860 | | |
| 269 | Premium for catwalks on hanger system at auditorium and stage; A2.8 | 1,521 | sf | 60.00 | EBP #4 | | |

078400 FIREPROOFING/FIRESTOPPING

| | | | | | | | |
|-----|---|---------|----|-----------|---------|--|--|
| 272 | Spray-applied fireproofing to beams and columns | 291,820 | sf | 2.50 | 729,550 | | |
| 273 | Fire stopping | 1 | ls | 75,000.00 | 75,000 | | |
| 274 | Intumescent paint to exposed beams | 1 | ls | 10,000.00 | 10,000 | | |

079500 EXPANSION CONTROL

| | | | | | | | |
|-----|------------------|-------|----|-------|---------|------------|--|
| 277 | Expansion joints | 2,476 | lf | 60.00 | 148,560 | | |
| 278 | SUBTOTAL | | | | | 11,502,969 | |

B1020 ROOF CONSTRUCTION

033000 CONCRETE

| | | | | | | | |
|-----|--|--------|-----|--------|--------|--|--|
| 283 | WWF reinforcement, 15% lap | 21,735 | sf | 1.10 | 23,909 | | |
| 284 | Concrete topping to metal decking, 6-1/2" thick; normal weight | 189 | cy | 148.00 | 27,972 | | |
| 285 | Place and finish concrete | 18,900 | sf | 2.50 | 47,250 | | |
| 286 | Rebar to decks | 5,670 | lbs | 1.32 | 7,484 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--------|--|---------|-----|-----------|---------------|--------------|
| 288 | 051200 | STRUCTURAL STEEL FRAMING | | | | | |
| 289 | | Beams / Columns / Bracing | | | | w/ B1010 | |
| 290 | | Premium for HSS | | | | w/ B1010 | |
| 291 | | Open web joists | 165 | tns | 3,200.00 | w/ B1011 | |
| 292 | | 1-1/2" Type WR Metal galvanized roof deck | 49,300 | sf | 3.50 | 172,550 | |
| 293 | | 2" Metal galvanized roof deck | 8,950 | sf | 4.50 | 40,275 | |
| 294 | | 3" acoustic Metal galvanized roof deck | 34,100 | sf | 9.00 | 306,900 | |
| 295 | | 2" Metal galvanized roof deck at plaza | 9,950 | sf | 4.50 | 44,775 | |
| 296 | | Miscellaneous | | | | | |
| 297 | | Moment connections | 65 | ea | 500.00 | w/ B1010 | |
| 298 | | Premium for exposed steel | 1 | ls | 50,000.00 | 50,000 | |
| 299 | | Canopies; included | | | | w/ B1010 | |
| 300 | | | | | | | |
| 301 | 078400 | FIREPROOFING/FIRESTOPPING | | | | | |
| 302 | | Spray-applied fireproofing to beams and deck | 80,500 | sf | 3.00 | 241,500 | |
| 303 | | Intumescent paint to exposed beams | 1 | ls | 40,000.00 | 40,000 | |
| 304 | | | | | | | |
| 305 | 079500 | EXPANSION CONTROL | | | | | |
| 306 | | Expansion joint | 620 | lf | 60.00 | 37,200 | |
| 307 | | SUBTOTAL | | | | 1,039,815 | |
| 308 | | | | | | | |
| 309 | | TOTAL - SUPERSTRUCTURE | | | | | \$12,542,784 |
| 310 | | | | | | | |
| 311 | | | | | | | |
| 312 | | | | | | | |
| 313 | | | | | | | |
| 314 | B20 | EXTERIOR CLOSURE | | | | | |
| 315 | | | | | | | |
| 316 | | | | | | | |
| 317 | B2010 | EXTERIOR WALLS | 151,485 | sf | | | |
| 318 | | | | | | | |
| 319 | 040001 | MASONRY | | | | | |
| 320 | | Face brick; WA1, WA2 | 72,290 | sf | 34.00 | 2,457,860 | |
| 321 | | Glazed brick | 620 | sf | 40.00 | 24,800 | |
| 322 | | Decorative CMU - ground faced/glazed | 59,550 | sf | 34.00 | 2,024,700 | |
| 323 | | Decorative CMU - loading area columns | 2,080 | sf | 34.00 | 70,720 | |
| 324 | | Premium for soldier course | | | | | |
| 325 | | 8" brick | 340 | lf | 20.00 | 6,800 | |
| 326 | | 16" brick | 1,060 | lf | 20.00 | 21,200 | |
| 327 | | 32" CMU | 160 | lf | 40.00 | 6,400 | |
| 328 | | 48" CMU | 150 | lf | 70.00 | 10,500 | |
| 329 | | Premium for brick patterning/sizes | 12,785 | sf | 7.00 | 89,495 | |
| 330 | | Premium for anti-graffiti coating at CMU | 23,350 | sf | 6.00 | 140,100 | |
| 331 | | Premium for CMU patterning | 1,655 | sf | 7.00 | 11,585 | |
| 332 | | Architectural precast date stone | 2 | ea | 1,000.00 | 2,000 | |
| 333 | | Precast sills at Auditorium | 30 | lf | 200.00 | 6,000 | |
| 334 | | Insulation; 4" | 134,540 | sf | 4.00 | 538,160 | |
| 335 | | Staging/lifts to exterior wall | 195,954 | sf | 4.00 | 783,816 | |
| 336 | | | | | | | |
| 337 | 052000 | MISC. METALS | | | | | |
| 338 | | Relieving angle | | | | w/ structural | |
| 339 | | Misc. metals at masonry | 134,540 | sf | 1.25 | 168,175 | |
| 340 | | Custom Fabricated Steel "Tree", Blue Bird Quote | 1 | ls | 40,000.00 | 40,000 | |
| 341 | | | | | | | |
| 342 | 070001 | WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | |
| 343 | | Self adhered modified bituminous sheet air/vapor barrier | 151,485 | sf | 7.50 | 1,136,138 | |
| 344 | | AVB at window openings | 14,643 | lf | 6.25 | 91,519 | |
| 345 | | Miscellaneous sealants | 151,485 | sf | 0.50 | 75,743 | |
| 346 | | AVB at soffits | 10,830 | sf | 8.00 | 86,640 | |
| 347 | | | | | | | |
| 348 | 070002 | ROOFING AND FLASHING | | | | | |
| 349 | | Membrane to walls and parapets | 2,060 | sf | 10.00 | 20,600 | |
| 350 | | | | | | | |
| 351 | 072100 | THERMAL INSULATION | | | | | |
| 352 | | Insulation at window openings | 14,643 | lf | 4.00 | 58,572 | |
| 353 | | Insulation at soffits | 10,830 | sf | 5.00 | 54,150 | |
| 354 | | | | | | | |
| 355 | 074210 | WALL PANELS | | | | | |
| 356 | | Metal panel | | | | | |
| 357 | | Exposed fastener lap seam metal panel; Centria | 14,040 | sf | 60.00 | 842,400 | |
| 358 | | Composite metal panel | 395 | sf | 80.00 | 31,600 | |
| 359 | | Sintered stone rainscreen | | | | | |
| 360 | | Sintered stone frieze panels | 450 | sf | 110.00 | 49,500 | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 358 | Sintered stone soffit | 1,380 | sf | 120.00 | 165,600 | | |
| 359 | Insulation; 4" | 14,885 | sf | 4.00 | included | | |
| 360 | Mockups | 1 | ls | 150,000.00 | 150,000 | | |
| 361 | Aluminum Column Covers | | | | | | |
| 362 | 16' high | 16 | ea | 10,054.40 | 160,870 | | |
| 363 | 14' high | 3 | ea | 8,797.60 | 26,393 | | |
| 364 | Roof screen at RTU's | 3,223 | sf | | | | |
| 365 | Acoustical | 3,223 | sf | 70.00 | 225,610 | | |
| 366 | | | | | | | |
| 367 | 092900 GYPSUM BOARD ASSEMBLIES | | | | | | |
| 368 | Exterior gypsum sheathing | 151,485 | sf | 3.00 | 454,455 | | |
| 369 | 6" metal stud | 117,355 | sf | 12.00 | 1,408,260 | | |
| 370 | 8" metal stud | 34,130 | sf | 14.00 | 477,820 | | |
| 371 | GWB lining, 5/8" | 151,485 | sf | 4.00 | 605,940 | | |
| 372 | Stucco soffit | 9,450 | sf | 35.00 | 330,750 | | |
| 373 | Framing at soffits | 10,830 | sf | 15.00 | 162,450 | | |
| 374 | | | | | | | |
| 375 | 101400 SIGNAGE | | | | | | |
| 376 | Signage, letters 2' high | 2 | loc | 20,000.00 | 40,000 | | |
| 377 | SUBTOTAL | | | | | 13,057,321 | |
| 378 | | | | | | | |
| 379 | B2020 WINDOWS | 44,469 | sf | | | | |
| 380 | | | | | | | |
| 381 | 061000 ROUGH CARPENTRY | | | | | | |
| 382 | Wood blocking at openings | 14,643 | lf | 12.00 | 175,716 | | |
| 383 | | | | | | | |
| 384 | 070001 WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | | |
| 385 | Backer rod & double sealant | 14,643 | lf | 9.50 | 139,109 | | |
| 386 | | | | | | | |
| 387 | 080001 WINDOWS | | | | | | |
| 388 | Aluminum windows; double glazed with argon-filled space and solar control low-e coating | 8,055 | sf | 95.00 | 765,225 | | |
| 389 | Kalwall | 880 | sf | 80.00 | 70,400 | | |
| 390 | Premium for openings | 210 | loc | 350.00 | 73,500 | | |
| 391 | | | | | | | |
| 392 | 084413 CURTAIN WALL SYSTEMS | | | | | | |
| 393 | Curtainwall, double glazed with argon-filled space and solar control low-e coating | 35,534 | sf | 125.00 | 4,441,750 | | |
| 394 | Curtainwall, triple glazed | | | | | NIC | |
| 395 | Premium for openings | 202 | loc | 1,000.00 | 202,000 | | |
| 396 | Premium for school guard glass | 2,479 | sf | 30.00 | 74,370 | | |
| 397 | Premium for sintered stone at CW | 1,358 | sf | 50.00 | 67,900 | | |
| 398 | Premium for custom frit | 170 | sf | 25.00 | 4,250 | | |
| 399 | Custom extended profile snap cover | 2,857 | lf | 40.00 | 114,280 | | |
| 400 | Curtainwall canopy | 2 | loc | 10,000.00 | 20,000 | | |
| 401 | | | | | | | |
| 402 | 089000 LOUVERS | | | | | | |
| 403 | Louvers | 600 | sf | 100.00 | 60,000 | | |
| 404 | SUBTOTAL | | | | | 6,208,500 | |
| 405 | | | | | | | |
| 406 | B2030 EXTERIOR DOORS | | | | | | |
| 407 | | | | | | | |
| 408 | 061000 ROUGH CARPENTRY | | | | | | |
| 409 | Wood blocking at openings | 396 | lf | 12.00 | 4,752 | | |
| 410 | | | | | | | |
| 411 | 079200 JOINT SEALANTS | | | | | | |
| 412 | Backer rod & double sealant | 396 | lf | 9.50 | 3,762 | | |
| 413 | | | | | | | |
| 414 | 084110 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS | | | | | | |
| 415 | Glazed aluminum entrance doors including frame and hardware; double | 12 | pr | 11,000.00 | 132,000 | | |
| 416 | Glazed aluminum entrance doors including frame and hardware; single | 4 | ea | 5,500.00 | 22,000 | | |
| 417 | Aluminum entrance doors including frame and hardware; double | 5 | pr | 9,000.00 | 45,000 | | |
| 418 | Aluminum entrance doors including frame and hardware; single | 14 | ea | 4,500.00 | 63,000 | | |
| 419 | FRP entrance doors including frame and hardware; double | 1 | pr | 8,000.00 | 8,000 | | |
| 420 | FRP entrance doors including frame and hardware; single | 4 | ea | 4,000.00 | 16,000 | | |
| 421 | Premium for 8'-4" - 9' high | 15 | ea | 1,000.00 | 15,000 | | |
| 422 | | | | | | | |
| 423 | 083300 OVERHEAD DOOR | | | | | | |
| 424 | Overhead door, 10'-4" x 10' | 1 | ea | 9,000.00 | 9,000 | | |
| 425 | Fire shutter, 3/4 hour | 1 | ea | 10,000.00 | 10,000 | | |
| 426 | | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|--------------------------|----------------------|---|----|----------|--------|---------|--------------|
| 087100 | DOOR HARDWARE | | | | | | |
| | Auto openers - allow | 4 | ea | 5,000.00 | 20,000 | | |
| | SUBTOTAL | | | | | 348,514 | |
| TOTAL - EXTERIOR CLOSURE | | | | | | | \$19,614,335 |

B30 ROOFING

B3010 ROOF COVERINGS

| | | | | | | | |
|-----------------|--|---------|-----|-----------|-----------|-----------|-------------|
| 055000 | MISC. METALS | | | | | | |
| | Roof ladder | 6 | ea | 4,000.00 | 24,000 | | |
| | Tie-off davits, 62 locations | 62 | ea | 1,300.00 | 80,600 | | |
| 061000 | ROUGH CARPENTRY | | | | | | |
| | Rough blocking at roofing | 22,770 | lf | 10.00 | 227,700 | | |
| | Rough blocking for future vapor mitigation fans | 18 | loc | 800.00 | 14,400 | | |
| 070002 | ROOFING AND FLASHING | | | | | | |
| | Flat roof | | | | | | |
| | PVC membrane, 60 mil, protection board; 20 year warranty | 148,230 | sf | 14.50 | 2,149,335 | | |
| | Premium for acoustically sensitive areas - R1B1, Thermal barrier board | 6,325 | sf | 2.00 | 12,650 | | |
| | Second floor roof terrace; Roof Type 1E/F | 9,200 | sf | 30.00 | 276,000 | | |
| | Canopy | | | | | | |
| | PVC membrane, 60 mil, protection board, insulation | 2,030 | sf | 13.00 | 26,390 | | |
| | Miscellaneous Roofing | | | | | | |
| | Overflow scupper | 32 | ea | 500.00 | 16,000 | | |
| | Factory fabricated fascia trim roof edge | 3,385 | lf | 45.00 | 152,325 | | |
| | Parapet cap | 820 | lf | 80.00 | 65,600 | | |
| | Air/Vapor barrier at roof edges | 4,205 | lf | 8.00 | 33,640 | | |
| | Walkway pads | 1 | ls | 40,000.00 | 40,000 | | |
| | Elevator ventilation unit | 2 | ea | 3,500.00 | 7,000 | | |
| | SUBTOTAL | | | | | 3,125,640 | |
| B3020 | ROOF OPENINGS | | | | | | |
| | Modular Skylights | 649 | sf | 130.00 | 84,370 | | |
| | Unit skylights w/ insulated curb | | | | | | |
| | US 01- 92" x 60" | 5 | ea | 5,512.00 | 27,560 | | |
| | US 02 - 58" x 58" | 48 | ea | 2,726.93 | 130,893 | | |
| | US 03 - 49" x 49" | 6 | ea | 2,403.70 | 14,422 | | |
| | US 04/04A - 40" x 40" | 9 | ea | 1,592.50 | 14,333 | | |
| | US 05 - 25" x 25" | 1 | ea | 687.70 | 688 | | |
| | US 06 - 8' diameter | 2 | ea | 6,545.76 | 13,092 | | |
| | US 07 - 5' diameter | 4 | ea | 2,556.94 | 10,228 | | |
| | US 08/08A - 49" x 33" | 10 | ea | 1,565.20 | 15,652 | | |
| | Smoke hatch at Stage | 2 | ea | 8,000.00 | 16,000 | | |
| | SUBTOTAL | | | | | 327,238 | |
| TOTAL - ROOFING | | | | | | | \$3,452,878 |

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

| | | | | | | | |
|--------|--------------------------------|---------|-----|------------|---------|--|--|
| 015200 | TRADE SUPPORT | | | | | | |
| | Hoisting | 1 | ls | 300,000.00 | 300,000 | | |
| 042000 | MASONRY | | | | | | |
| | 8" CMU | 15,689 | sf | 27.00 | 423,603 | | |
| | 8" CMU, elevator shaft | 7,509 | sf | 32.00 | 240,288 | | |
| | 6" CMU | 3,359 | sf | 26.00 | 87,334 | | |
| 050001 | MISCELLANEOUS METALS | | | | | | |
| | Seismic clips to CMU | 477 | ea | 130.00 | 62,010 | | |
| | Support at operable partitions | 85 | lf | 150.00 | 12,750 | | |
| | Miscellaneous metals to CMU | 26,557 | sf | 1.50 | 39,836 | | |
| 061000 | ROUGH CARPENTRY | | | | | | |
| | Wood blocking at interiors | 408,600 | gsf | 0.50 | 204,300 | | |
| | Rough blocking at partitions | 76,311 | lf | 6.00 | 457,866 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 499 | Wood blocking at interior glazing openings | 9,497 | lf | 4.00 | 37,988 | | |
| 500 | | | | | | | |
| 501 | 070001 WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | | |
| 502 | Backer rod & double sealant at openings | 9,497 | lf | 5.00 | 47,485 | | |
| 503 | Miscellaneous sealants at partitions | 408,600 | gsf | 0.65 | 265,590 | | |
| 504 | | | | | | | |
| 505 | 080002 GLASS AND GLAZING | | | | | | |
| 506 | Butt glazing | | | | | | |
| 507 | Tempered glass, 3/8" | 1,575 | sf | 74.00 | 116,550 | | |
| 508 | Laminated glass, 9/16" | 4,582 | sf | 82.00 | 375,724 | | |
| 509 | Acoustic - double paned | 2,102 | sf | 125.00 | 262,750 | | |
| 510 | Premium for mirrored glass at PS | 1 | ls | 1,000.00 | 1,000 | | |
| 511 | Premium for ballistic glazing at Transaction window | 1 | ls | 25,000.00 | NIC | | |
| 512 | | | | | | | |
| 513 | 084413 CURTAIN WALL SYSTEMS | | | | | | |
| 514 | Interior curtainwall | 813 | sf | 120.00 | 97,560 | | |
| 515 | | | | | | | |
| 516 | 092900 GYPSUM BOARD ASSEMBLIES | | | | | | |
| 517 | Type 1A- 6" MS w/ 5/8" GWB e/s batt insulation | 70,331 | sf | 13.25 | 931,886 | | |
| 518 | Type 1B- 3 5/8" MS w/ 5/8" GWB e/s w/ batt insulation | 1,247 | sf | 11.25 | 14,029 | | |
| 519 | Type 1C- 8" MS w/ 5/8" GWB e/s w/ batt insulation | 572 | sf | 15.25 | 8,723 | | |
| 520 | Type 2A- 6" MS w/ 2 layers GWB o/s, 1 layer o/s w/ insulation | 169,415 | sf | 14.75 | 2,498,871 | | |
| 521 | Type 2B- 3-5/8" MS w/ 2 layers GWB o/s, 1 layer o/s w/ insulation | 332 | sf | 12.75 | 4,233 | | |
| 522 | Type 2C- 8" MS w/ 2 layers GWB o/s, 1 layer o/s w/ insulation | 25,255 | sf | 16.75 | 423,021 | | |
| 523 | Type 3A 6" MS w/ 2 layers GWB e/s w/ insulation | 66,455 | sf | 16.25 | 1,079,894 | | |
| 524 | Type 3C 8" MS w/ 2 layers GWB e/s w/ insulation | 4,749 | sf | 18.25 | 86,669 | | |
| 525 | Type 4A 6" MS w/ 1 layer GWB e/s, 1 layer plywood w/ insulation | 3,905 | sf | 15.75 | 61,504 | | |
| 526 | Type 5A- 6" MS w/ 5/8" GWB e/s | 9,858 | sf | 12.00 | 118,296 | | |
| 527 | Type 5B- 3-5/8" MS w/ 5/8" GWB e/s | 300 | sf | 10.00 | 3,000 | | |
| 528 | Type 6A- 6" MS w/ 5/8" GWB o/s batt insulation | 24,632 | sf | 10.25 | 252,478 | | |
| 529 | Type 6B- 3-5/8" MS w/ 5/8" GWB o/s batt insulation | 8,705 | sf | 8.25 | 71,816 | | |
| 530 | Type 7A- 6" MS w/ 2 lyr 5/8" GWB o/s batt insulation | 115,568 | sf | 11.75 | 1,357,924 | | |
| 531 | Type 7B- 3-5/8" MS w/ 2 lyr 5/8" GWB o/s batt insulation | 10,819 | sf | 9.75 | 105,485 | | |
| 532 | Type 7C- 8" MS w/ 2 lyr 5/8" GWB o/s batt insulation | 81 | sf | 13.75 | 1,114 | | |
| 533 | Type 8A- 6" MS w/ 5/8" GWB o/s | 27,270 | sf | 9.00 | 245,430 | | |
| 534 | Type 8B- 3-5/8" MS w/ 5/8" GWB o/s batt insulation | 74,562 | sf | 7.00 | 521,934 | | |
| 535 | Premium for wall @ bBB | 4,800 | sf | 15.00 | 72,000 | | |
| 536 | Type 10A - 4" MS w/ 2 layers 5/8" GWB o/s, 1 layer 1" liner board, batt insulation | 18,109 | sf | 12.75 | 230,890 | | |
| 537 | Type 12A- 2 rows of 3 5/8" MS w/ 2 layers GWB o/s ea row, w/ insulation in e row | 1,453 | sf | 19.50 | 28,334 | | |
| 538 | Type 12B- 2 rows of 6" MS w/ 2 layers GWB o/s ea row, w/ insulation in e row | 18,707 | sf | 23.50 | 439,615 | | |
| 539 | Type 14A - low wall | 2,625 | sf | 12.00 | 31,500 | | |
| 540 | Miscellaneous drywall | 408,600 | sf | 0.50 | 204,300 | | |
| 541 | | | | | | | |
| 542 | 102200 OPERABLE PARTITIONS | | | | | | |
| 543 | 8' high operable walls at classrooms | 680 | sf | 70.00 | 47,600 | | |
| 544 | | | | | | | |
| 545 | SUBTOTAL | | | | | 11,873,180 | |
| 546 | | | | | | | |
| 547 | C1020 INTERIOR DOORS | | | | | | |
| 548 | | | | | | | |
| 549 | 061000 ROUGH CARPENTRY | | | | | | |
| 550 | Wood blocking at openings | 12,614 | lf | 4.00 | 50,456 | | |
| 551 | | | | | | | |
| 552 | 070001 WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | | |
| 553 | Backer rod & double sealant | 12,614 | lf | 5.00 | 63,070 | | |
| 554 | | | | | | | |
| 555 | 080002 GLASS AND GLAZING | | | | | | |
| 556 | Sidelights - glazing | 347 | sf | 40.00 | 13,880 | | |
| 557 | | | | | | | |
| 558 | 081110 HOLLOW METAL DOOR FRAMES | | | | | | |
| 559 | Hollow metal Frames, single | 622 | ea | 450.00 | 279,900 | | |
| 560 | Hollow metal Frames, double | 90 | ea | 600.00 | 54,000 | | |
| 561 | Sidelight frames | 347 | sf | 35.00 | 12,145 | | |
| 562 | | | | | | | |
| 563 | 081400 WOOD DOORS | | | | | | |
| 564 | Wood door | 802 | ea | 590.00 | 473,180 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--------|---|---------|-----|-----------|-------------------------|-----------|
| 565 | | Premium for type B | 37 | ea | 300.00 | 11,100 | |
| 566 | | Premium for type D | 42 | ea | 150.00 | 6,300 | |
| 567 | | Premium for type E | 167 | ea | 200.00 | 33,400 | |
| 568 | | Premium for type F | 118 | ea | 300.00 | 35,400 | |
| 569 | | Premium for type H | 19 | ea | 300.00 | 5,700 | |
| 570 | | Premium for oversized leaf | 10 | ea | 500.00 | 5,000 | |
| 571 | | Premium for acoustic gasketing | 199 | ea | 400.00 | 79,600 | |
| 572 | | | | | | | |
| 573 | 083110 | ACCESS DOORS AND FRAMES | | | | | |
| 574 | | Access doors | 1 | ls | 20,000.00 | 20,000 | |
| 575 | | | | | | | |
| 576 | 083300 | OVERHEAD DOOR | | | | | |
| 577 | | 4' x 4' | 1 | ea | 1,040.00 | 1,040 | |
| 578 | | 5'-0" x 4'-4" | 1 | ea | 1,397.50 | 1,398 | |
| 579 | | 10' x 4'-4" | 1 | ea | 2,795.00 | 2,795 | |
| 580 | | 7' x 10' | 1 | ea | 4,550.00 | 4,550 | |
| 581 | | 7'-6" x 5' | 1 | ea | 2,437.50 | 2,438 | |
| 582 | | Side Coiling Grilles | | | | | |
| 583 | | 64' x 10', at scramble | 1 | ea | 44,800.00 | 44,800 | |
| 584 | | | | | | | |
| 585 | 083513 | FOLDING DOORS GLASS | | | | | |
| 586 | | Nanawall at T-Plan, 6' x 8' | 1 | ea | 10,560.00 | 10,560 | |
| 587 | | Nanawall at Library, 24' x 10' | 1 | ea | 52,800.00 | 52,800 | |
| 588 | | | | | | | |
| 589 | 084110 | ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS | | | | | |
| 590 | | Glazed aluminum entrance doors including frame and hardware; double | 13 | pr | 11,000.00 | 143,000 | |
| 591 | | Glazed aluminum entrance doors including frame and hardware; single | 3 | ea | 5,500.00 | 16,500 | |
| 592 | | Premium for 9' high | 12 | ea | 1,000.00 | 12,000 | |
| 593 | | | | | | | |
| 594 | 087100 | DOOR HARDWARE | | | | | |
| 595 | | Hardware to doors | 802 | set | 950.00 | 761,900 | |
| 596 | | | | | | | |
| 597 | 090007 | PAINTING | | | | | |
| 598 | | Finish doors and frames | 802 | ea | 200.00 | 160,400 | |
| 599 | | SUBTOTAL | | | | | 2,357,312 |
| 600 | | | | | | | |
| 601 | C1030 | SPECIALTIES / MILLWORK | | | | | |
| 602 | | | | | | | |
| 603 | 055000 | MISCELLANEOUS METALS | | | | | |
| 604 | | Catwalk access ladder 13'-4" high | 1 | ea | 6,000.00 | 6,000 | |
| 605 | | Stage left and right gallery ladder 13'-10" high | 2 | ea | 6,000.00 | 12,000 | |
| 606 | | Stage left and right lighting slot ladders 27'-6" high | 2 | ea | 12,000.00 | 24,000 | |
| 607 | | Stage right gallery ladder 20'-10" high | 1 | ea | 10,000.00 | 10,000 | |
| 608 | | Catwalk at performing arts | 681 | sf | | w/ structural steel | |
| 609 | | Catwalks on hanger system at auditorium and stage; A2.8 | 1,521 | sf | | w/ structural steel EBP | |
| 610 | | Guardrail at DLab ramp | 20 | lf | 250.00 | 5,000 | |
| 611 | | Handrail at DLab ramp | 22 | lf | 75.00 | 1,650 | |
| 612 | | Metal grating above auditorium sound and control room | 248 | sf | 55.00 | 13,640 | |
| 613 | | Railing at auditorium catwalks | 754 | lf | 210.00 | 158,340 | |
| 614 | | Railing at performing arts catwalk | 180 | lf | 210.00 | 37,800 | |
| 615 | | Security partition with door at stairs 1 & 2 roof access | 13 | lf | 400.00 | 5,200 | |
| 616 | | Security partition - varying height handrail extension to join top of security gate at stair 2; 8/A10.1.3 | 7 | lf | 200.00 | 1,400 | |
| 617 | | Glass guardrail at areas open to below, 42" high (3/A10.0.2) | 135 | lf | 450.00 | 60,750 | |
| 618 | | Miscellaneous metals throughout building | 408,600 | sf | 0.75 | 306,450 | |
| 619 | | Wood cap to top of auditorium half walls; 6/A8.7.6 | 130 | lf | 50.00 | 6,500 | |
| 620 | | Auditorium balcony safety rail at bottom of aisle stairs | 9 | lf | 90.00 | 810 | |
| 621 | | Auditorium balcony aisle handrails; 9/A8.7.5 | 38 | lf | 210.00 | 7,980 | |
| 622 | | Auditorium side balcony railing above wood paneling; 5/A8.7.4 | 80 | lf | 90.00 | 7,200 | |
| 623 | | Unistrut pipe grid at maker space classrooms | 1,160 | sf | 20.00 | 23,200 | |
| 624 | | Hook and support for suspended swings | 7 | loc | 1,500.00 | 10,500 | |
| 625 | | | | | | | |
| 626 | 057500 | DECORATIVE FORMED METAL | | | | | |
| 627 | | <u>Aluminum insulated column covers; A8.4.4</u> | | | | | |
| 628 | | 9'-6" high | 4 | ea | 2,850.00 | 11,400 | |
| 629 | | 11'-0" high | 2 | ea | 3,300.00 | 6,600 | |
| 630 | | 12'-0" high | 6 | ea | 3,600.00 | 21,600 | |
| 631 | | 14'-0" high | 5 | ea | 4,200.00 | 21,000 | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 632 | 17'-6" high | 2 | ea | 5,250.00 | 10,500 | | |
| 633 | 17'-6" high | 2 | ea | 5,250.00 | 10,500 | | |
| 634 | 25'-0" high | 3 | ea | 7,500.00 | 22,500 | | |
| 635 | 26'-8" high | 2 | ea | 8,001.00 | 16,002 | | |
| 636 | 40'-0" high | 4 | ea | 12,000.00 | 48,000 | | |
| 637 | | | | | | | |
| 638 | 061000 ROUGH CARPENTRY | | | | | | |
| 639 | Backer panels in electrical closets | 1 | ls | 10,000.00 | 10,000 | | |
| 640 | D Lab seating risers and ramp | | | | | w/ concrete | |
| 641 | | | | | | | |
| 642 | 064020 INTERIOR ARCHITECTURAL WOODWORK | | | | | | |
| 643 | Multi sensory wall - interactive maple recessed pegboard; 5/A8.6.5 | 90 | sf | 50.00 | 4,500 | | |
| 644 | 6" solid surface guardrail cap at open to below; 6/A10.0.2 | 245 | lf | 50.00 | 12,250 | | |
| 645 | Built in tall storage cabs @ life skills cafe w/ Plam face & pivot doors 54" | 3 | ea | 2,925.00 | 8,775 | | |
| 646 | Solid surface jamb at guardrails 42" high | 8 | ea | 175.00 | 1,400 | | |
| 647 | Trash/recycling millwork | | | | | FF&E | |
| 648 | 4" wood trim at orchestra pit edge and bottom of stage edge; 2/A8.76 | 100 | lf | 40.00 | 4,000 | | |
| 649 | 3-3/8" wide x 6'-8" high wood filler panel between lockers with 2x6 blocking at circular locker pods; A8.5.1 | 216 | ea | 226.78 | 48,984 | | |
| 650 | Window sills, exterior windows/CW | 2,782 | lf | 60.00 | 166,920 | | |
| 651 | Window sills, interior borrowed lites | 1,521 | lf | 60.00 | 91,260 | | |
| 652 | Benches | | | | | | |
| 653 | ADA Bench at locker and team rooms | 14 | lf | 150.00 | 2,100 | | |
| 654 | Auditorium balcony lobby bench with back; 20/A8.6.2 | 17 | lf | 300.00 | 5,100 | | |
| 655 | Courtyard window bay wood benches; 15/A8.6.2 | 17 | lf | 250.00 | 4,250 | | |
| 656 | Library bench 18" deep; 13/A8.6.2 | 26 | lf | 250.00 | 6,500 | | |
| 657 | Library bench under stair; 18/A8.6.2 | 8 | lf | 250.00 | 2,000 | | |
| 658 | Library bench under stair - angled back; 18/A8.6.2 | 11 | sf | 80.00 | 880 | | |
| 659 | Library bench under stair wood panel sides; 13/A10.2.3 | 69 | sf | 75.00 | 5,175 | | |
| 660 | North entry backed bench; 15/A8.6.1 | 20 | lf | 250.00 | 5,000 | | |
| 661 | Performing arts under stair bench 18" deep; 5/A8.6.1 | 44 | lf | 500.00 | 22,000 | | |
| 662 | Performing arts under stair bench top section - veneer plywood; 5/A8.6.1 | 27 | sf | 70.00 | 1,890 | | |
| 663 | Performing arts/spine bench 18" deep; 3/A8.6.1 | 36 | lf | 500.00 | 18,000 | | |
| 664 | Performing arts/Spine bench; 9/A8.6.1 | 29 | lf | 500.00 | 14,500 | | |
| 665 | Performing arts/spine bench upper piece; 3/A8.6.1 | 44 | sf | 70.00 | 3,080 | | |
| 666 | Preschool under stair bench; 8/A8.6.1 | 9 | lf | 500.00 | 4,500 | | |
| 667 | Preschool under stair bench - angled back; 8/A8.6.1 | 11 | sf | 80.00 | 880 | | |
| 668 | Preschool under stair bench - platform piece; 8/A8.6.1 | 20 | sf | 70.00 | 1,400 | | |
| 669 | Upper forum seating area bench 18" deep; 2/A8.6.5 | 27 | lf | 250.00 | 6,750 | | |
| 670 | Upper forum seating area bench 2 tier; 2/A8.6.5 | 21 | lf | 500.00 | 10,500 | | |
| 671 | Upper forum seating area counter; 2/A8.6.5 | 8 | lf | 400.00 | 3,200 | | |
| 672 | Wood bench with back at cafeteria; 1/A8.6.1 | 56 | lf | 500.00 | 28,000 | | |
| 673 | Desks and counters | | | | | | |
| 674 | Cafeteria island counter 3'-8" deep; 1/A8.6.7 | 82 | lf | 400.00 | 32,800 | | |
| 675 | Counter @ workbars overlooking forum; 8/A8.6.6 | 19 | lf | 250.00 | 4,750 | | |
| 676 | Library light cone 3'-0" wide counter; 2/A8.6.8, curved | 100 | lf | 400.00 | 40,000 | | |
| 677 | Media center counter/display | 9 | lf | 250.00 | 2,250 | | |
| 678 | Life skills cafe counter with cabinets below; A8.6.7 | 53 | lf | 800.00 | 42,400 | | |
| 679 | Life skills café tall cabinets, pivot sliding doors w/ casework behind | 12 | lf | 1,000.00 | 12,000 | | |
| 680 | Lightwell counter with keyboard tray 16" deep; 3/A8.6.8, curved | 276 | lf | 400.00 | 110,400 | | |
| 681 | Desk @ reception 231A | 1 | ls | 4,200.00 | 4,200 | | |
| 682 | General office desk; 5/A8.6.3 | 1 | ls | 7,116.90 | 7,117 | | |
| 683 | Library circulation desk; 12/A8.6.3 | 1 | ls | 18,000.00 | 18,000 | | |
| 684 | Mass Ave admin desk; 8/A8.6.3 | 1 | ls | 9,750.00 | 9,750 | | |
| 685 | Preschool admin desk; 1/A8.6.3 | 1 | ls | 18,750.00 | 18,750 | | |
| 686 | Display cases | | | | | | |
| 687 | Display case 3'-6" x 5'-0" at auditorium balcony corridor | 3 | ea | 1,575.00 | 4,725 | | |
| 688 | Display case at corridor 4'-0" x 4'-0"; 11/A8.6.4 | 1 | ea | 1,440.00 | 1,440 | | |
| 689 | Display case double sided at art rooms 2'-6" x 2'-6" | 6 | ea | 750.00 | 4,500 | | |
| 690 | Display case double sided at art rooms 3'-8" x 7'-2" | 11 | ea | 3,156.35 | 34,720 | | |
| 691 | Narrow display case at auditorium balcony entry 3'-0" x 4'-0"; 16/A8.6.4 | 1 | ea | 720.00 | 720 | | |
| 692 | Narrow display case at auditorium entry 4'-0" x 4'-0"; 4/A8.6.4 | 2 | ea | 960.00 | 1,920 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--------|--|---------|-----|-----------|-----------|--|
| 693 | | Narrow display case at library entry 3'-0" x 4'-0"; 12/A8.6.4 | 1 | ea | 720.00 | 720 | |
| 694 | | | | | | | |
| 695 | 070001 | WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | |
| 696 | | Miscellaneous sealants throughout building | 408,600 | gsf | 1.00 | 408,600 | |
| 697 | | | | | | | |
| 698 | 080002 | GLAZING | | | | | |
| 699 | | Mirror at alt pe fitness | 1,015 | sf | 38.00 | 38,570 | |
| 700 | | Mirror at dressing rooms | 303 | sf | 38.00 | 11,514 | |
| 701 | | Mirror at ensemble | 20 | sf | 38.00 | 760 | |
| 702 | | Mirror at SPED alt pe | 430 | sf | 38.00 | 16,340 | |
| 703 | | Double sided mirror at PS observation | 2 | loc | 500.00 | 1,000 | |
| 704 | | | | | | | |
| 705 | 101100 | VISUAL DISPLAY SURFACES | | | | | |
| 706 | | Marker board | 13,416 | sf | 24.00 | 321,984 | |
| 707 | | Marker board with music staff lines | 235 | sf | 28.00 | 6,580 | |
| 708 | | Tackboard | 2,148 | sf | 22.00 | 47,256 | |
| 709 | | LCD screen | | | | NIC | |
| 710 | | | | | | | |
| 711 | 101400 | SIGNAGE | | | | | |
| 712 | | Building directory | 1 | loc | 3,000.00 | 3,000 | |
| 713 | | Room Signs | 733 | loc | 120.00 | 87,960 | |
| 714 | | Other signage/graphics | 1 | ls | 35,000.00 | 35,000 | |
| 715 | | "Auditorium" cast letter signage at entrance, suspended from above | 1 | loc | 1,000.00 | 1,000 | |
| 716 | | "Auditorium" cast letter signage at entrance | 1 | loc | 750.00 | 750 | |
| 717 | | "Café" cast letter signage at library desk | 1 | ea | 300.00 | 300 | |
| 718 | | "Media center" cast letter signage at library desk | 3 | ea | 825.00 | 2,475 | |
| 719 | | "Circulation" cast letter signage at library desk | 1 | loc | 825.00 | 825 | |
| 720 | | Custom vinyl graphic at gym & café | 5,403 | sf | 20.00 | 108,060 | |
| 721 | | Vinyl graphic at Auditorium | 2,000 | sf | 15.00 | 30,000 | |
| 722 | | Vinyl graphic wall mural in corridors | 2,050 | sf | 15.00 | 30,750 | |
| 723 | | River of hands mural from existing bldg to be salvaged and reinstalled | 140 | sf | 15.00 | 2,100 | |
| 724 | | | | | | | |
| 725 | 102110 | TOILET COMPARTMENTS | | | | | |
| 726 | | ADA | 14 | ea | 1,800.00 | 25,200 | |
| 727 | | Standard | 41 | ea | 1,600.00 | 65,600 | |
| 728 | | Urinal screen | 9 | ea | 650.00 | 5,850 | |
| 729 | | Fourth wall partition at select single bathrooms | 18 | ea | 2,200.00 | 39,600 | |
| 730 | | Shower curtain and rod including changing stalls | 23 | ea | 400.00 | 9,200 | |
| 731 | | Shower seat | 7 | ea | 350.00 | 2,450 | |
| 732 | | Adult changing station | 1 | ea | 1,500.00 | 1,500 | |
| 733 | | Regular changing station | 10 | ea | 1,000.00 | 10,000 | |
| 734 | | | | | | | |
| 735 | 102800 | TOILET ACCESSORIES | | | | | |
| 736 | | Gang bathroom | 28 | rms | 2,350.00 | 65,800 | |
| 737 | | Single bathroom | 73 | rms | 800.00 | 58,400 | |
| 738 | | Janitors Closet Accessories | 14 | rms | 300.00 | 4,200 | |
| 739 | | Custodian work room accessories | 1 | rms | 1,000.00 | 1,000 | |
| 740 | | Electric hand dryers at gang bathrooms | 28 | ea | 750.00 | 21,000 | |
| 741 | | | | | | | |
| 742 | 104400 | FIRE PROTECTION SPECIALTIES | | | | | |
| 743 | | Fire extinguisher cabinets | 136 | ea | 350.00 | 47,600 | |
| 744 | | | | | | | |
| 745 | 105000 | LOCKERS | | | | | |
| 746 | | Team room lockers on wood base; single tier | 100 | ea | 350.00 | 35,000 | |
| 747 | | Locker room, coach and teacher planning lockers on wood base; 5 Tier | 1,620 | ope | 170.00 | 275,400 | |
| 748 | | Bench at locker and team rooms | 184 | lf | 90.00 | 16,560 | |
| 749 | | Student lockers on wood base; 3 tier | 2,025 | ope | 190.00 | 384,750 | |
| 750 | | Kitchen lockers; single tier | 6 | ea | 300.00 | 1,800 | |
| 751 | | SUBTOTAL | | | | 3,937,212 | |

TOTAL - INTERIOR CONSTRUCTION

\$18,167,704

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

033000 CONCRETE



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|---|-------|-----|-----------|-----------|---------|-------------|
| 761 | Forum seating steps | 1 | ls | 15,000.00 | 15,000 | | |
| 762 | Concrete to stairs | 24 | flr | 2,800.00 | 67,200 | | |
| 763 | | | | | | | |
| 764 | 055000 MISCELLANEOUS METALS | | | | | | |
| 765 | Forum stairs (steel at seating with structural steel tonnage) | 1 | ls | 75,000.00 | 75,000 | | |
| 766 | Egress stairs - Stair 2 & 3 - handrails and guardrails only (Structure w/ EBP #4) | 7 | flr | 8,000.00 | 56,000 | | |
| 767 | Egress stairs - Stair 1, 4, 5, 6, 8, 9 | 17 | flr | 32,000.00 | 544,000 | | |
| 768 | Straight run egress stairs - Stair 7, 9 | 3 | flr | 25,000.00 | 75,000 | | |
| 769 | Straight run stairs with wood panel guardrail and cap at stair 10; A10.2.1 | 1 | flr | 30,000.00 | 30,000 | | |
| 770 | Straight run stairs with GWB/Glass guardrail and wood cap - Stair 11; A10.2.2 | 1 | flr | 28,000.00 | 28,000 | | |
| 771 | Straight run stairs with GWB guardrail and woodcap - Stair 12; A10.2.2 | 1 | flr | 26,000.00 | 26,000 | | |
| 772 | Radiused stair with glass guardrail - Stair 13, A10.2.3 | 1 | flr | 35,000.00 | 35,000 | | |
| 773 | Ships ladder at stair 8 | 1 | loc | 15,000.00 | 15,000 | | |
| 774 | SUBTOTAL | | | | | 966,200 | |
| 775 | | | | | | | |
| 776 | C2020 STAIR FINISHES | | | | | | |
| 777 | | | | | | | |
| 778 | 064020 INTERIOR ARCHITECTURAL WOODWORK | | | | | | |
| 779 | Wood and resin composite flooring at forum stairs/steps - treads, risers and landing | 1,498 | sf | 35.00 | 52,430 | | |
| 780 | | | | | | | |
| 781 | 090005 RESILIENT FLOORS | | | | | | |
| 782 | Rubber tile at stairs - landings | 5,040 | sf | 14.00 | 70,560 | | |
| 783 | Rubber tile at stairs - treads & risers | 2,040 | lft | 22.00 | 44,880 | | |
| 784 | | | | | | | |
| 785 | 090007 PAINTING | | | | | | |
| 786 | Photo luminescence markings | 24 | flr | 2,000.00 | 48,000 | | |
| 787 | Paint to staircases | 24 | flr | 3,000.00 | 72,000 | | |
| 788 | | | | | | | |
| 789 | 096625 PRECAST EPOXY TERRAZZO | | | | | | |
| 790 | Precast terrazzo tread/riser unit, 8/A10.3.2 | 383 | lf | 125.00 | 47,875 | | |
| 791 | | | | | | | |
| 792 | 101500 PHOTOLUMINESCENT SAFETY PRODUCTS | | | | | | |
| 793 | Photoluminescent safety at stairs | 31 | flr | 2,400.00 | 74,400 | | |
| 794 | SUBTOTAL | | | | | 410,145 | |
| 795 | | | | | | | |
| 796 | TOTAL - STAIRCASES | | | | | | \$1,376,345 |
| 797 | | | | | | | |
| 798 | | | | | | | |
| 799 | C30 INTERIOR FINISHES | | | | | | |
| 800 | | | | | | | |
| 801 | C3010 WALL FINISHES | | | | | | |
| 802 | | | | | | | |
| 803 | 064020 INTERIOR ARCHITECTURAL WOODWORK | | | | | | |
| 804 | Maple wood grille with backer at Auditorium walls ; Armstrong Woodworks Grille (A8.7.1 & A8.7.2) 5 blade panels | 940 | sf | 55.00 | 51,700 | | |
| 805 | Maple wood grille with backer at Auditorium walls ; Armstrong Woodworks Grille (A8.7.1 & A8.7.2) 7 blade panels | 810 | sf | 65.00 | 52,650 | | |
| 806 | Maple wood grille with backer at Auditorium walls ; Armstrong Woodworks Grille (A8.7.1 & A8.7.2) 9 blade panels | 800 | sf | 75.00 | 60,000 | | |
| 807 | Wood veneer 3/4" plywood at lobby overlook including flooring (A8.6.5) | 300 | sf | 75.00 | 22,500 | | |
| 808 | Wood panel at proscenium head and jambs (A8.7.6) | 808 | sf | 90.00 | 72,720 | | |
| 809 | Plywood behind wood panel at proscenium at front face (A8.7.6) | 303 | sf | 6.00 | 1,818 | | |
| 810 | Wood panel at front and underside of auditorium balcony including plywood and 4" stud framing (1&6/A8.7.4) | 1,644 | sf | 110.00 | 180,840 | | |
| 811 | Wood panel at fusco entrance | 1,345 | sf | 75.00 | Alternate | | |
| 812 | Reinstall salvaged fusco entrance | 1 | ls | | w/ demo | | |
| 813 | Wood panel at media center entrances | 184 | sf | 75.00 | 13,800 | | |
| 814 | Wood panel at upper auditorium balcony entrance | 120 | sf | 75.00 | 9,000 | | |
| 815 | Wood panel at D lab entrances | 86 | sf | 75.00 | 6,450 | | |
| 816 | Wood paneling at auditorium entrance including faceted ceiling and wall details | 1,490 | sf | 110.00 | 163,900 | | |
| 817 | | | | | | | |
| 818 | Wood paneling at corridor balconies (9/A10.0.2) | 238 | sf | 75.00 | 17,850 | | |
| 819 | Wood veneer plywood top at cafeteria lockers | 750 | sf | 55.00 | 41,250 | | |
| 820 | Homosote tackable wall panels art rooms, corridor and maker classes | 4,842 | sf | 16.00 | 77,472 | | |
| 821 | | | | | | | |
| 822 | 066400 FRP PANELING | | | | | | |
| 823 | FRP wall panels (10'-4" at kitchen, 8'-4" at kitchen support rooms) | 5,250 | sf | 14.00 | 73,500 | | |
| 824 | | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-----------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 825 | 090002 <i>TILE</i> | | | | | | |
| 826 | Toilet room wall tile | 16,610 | sf | 22.00 | 365,420 | | |
| 827 | Full height tile at showers | 155 | sf | 22.00 | 3,410 | | |
| 828 | Cafeteria tile | 2,960 | sf | 24.00 | 71,040 | | |
| 829 | High school tile | 38,431 | sf | 24.00 | 922,344 | | |
| 830 | Pre school wing corridor tile | 3,560 | sf | 24.00 | 85,440 | | |
| 831 | Premium for graphic tile - floor level designation detail; similar to 2/A12.0.8A | 8 | loc | 200.00 | 1,600 | | |
| 832 | Premium for graphic tile -male & female bathroom detail; similar to 2K/A11.1 | 26 | loc | 250.00 | 6,500 | | |
| 833 | | | | | | | |
| 834 | 090007 <i>PAINTING</i> | | | | | | |
| 835 | Paint to GWB | 1,062,353 | sf | 0.80 | 849,882 | | |
| 836 | Paint to CMU | 45,605 | sf | 1.25 | 57,006 | | |
| 837 | Premium for high performance paint at select locations | 51,170 | sf | 0.75 | 38,378 | | |
| 838 | Floor numbering at stairs | 1 | ls | 20,000.00 | 20,000 | | |
| 839 | Prime and paint wall panels at rear of auditorium | 2,519 | sf | 2.00 | removed | | |
| 840 | | | | | | | |
| 841 | 098400 <i>ACOUSUSTIC ROOM COMPONENTS</i> | | | | | | |
| 842 | Modular diffusive wall panels, solid mineral profile paneling at auditorium back wall (Modular Arts) | 2,519 | sf | 59.00 | removed | | |
| 843 | Sprayed acoustic finish system at library cone and steam and humanities cones and trapezoid features, Acoustic plaster; dwg A8.3.1 | 16,138 | sf | 15.00 | 242,070 | | |
| 844 | <u>Acoustic wall panels - AWP-1 (Tectum)</u> | | | | | | |
| 845 | Alt PE | 195 | sf | 20.00 | 3,900 | | |
| 846 | Band | 990 | sf | 20.00 | 19,800 | | |
| 847 | Chorus | 425 | sf | 20.00 | 8,500 | | |
| 848 | Ensemble | 200 | sf | 20.00 | 4,000 | | |
| 849 | Large gym | 2,000 | sf | 20.00 | 40,000 | | |
| 850 | Locker and team rooms | 765 | sf | 20.00 | 15,300 | | |
| 851 | Practice | 810 | sf | 20.00 | 16,200 | | |
| 852 | Pre-k multipurpose | 754 | sf | 20.00 | 15,080 | | |
| 853 | Production studio | 80 | sf | 20.00 | 1,600 | | |
| 854 | Production lab | 390 | sf | 20.00 | 7,800 | | |
| 855 | Small gym | 545 | sf | 20.00 | 10,900 | | |
| 856 | SPED Alt PE | 665 | sf | 20.00 | 13,300 | | |
| 857 | <u>Acoustic wall panels - AWP-2 (1" Fiberglass)</u> | | | | | | |
| 858 | Corridor | 1,480 | sf | 30.00 | 44,400 | | |
| 859 | D lab | 288 | sf | 30.00 | 8,640 | | |
| 860 | Spine | 688 | sf | 30.00 | 20,640 | | |
| 861 | Library learning commons | 870 | sf | 30.00 | 26,100 | | |
| 862 | <u>Acoustic wall panels - AWP- 3 (Black architectural fiberglass boards)</u> | | | | | | |
| 863 | Performing arts; 2" thick | 720 | sf | 12.00 | 8,640 | | |
| 864 | <u>Acoustic wall panels - AWP- 5 (Fabric wrapped fiberglass core panels)</u> | | | | | | |
| 865 | Auditorium | 320 | sf | 30.00 | 9,600 | | |
| 866 | Polyester felt wall panels behind wood panels in Auditorium (1/A8.7.1) AWP-4 | 940 | sf | 30.00 | 28,200 | | |
| 867 | SUBTOTAL | | | | | 3,844,724 | |
| 868 | | | | | | | |
| 869 | C3020 FLOOR FINISHES | | | | | | |
| 870 | | | | | | | |
| 871 | 015200 <i>TRADE SUPPORT</i> | | | | | | |
| 872 | Final cleaning | 408,600 | sf | 1.00 | 408,600 | | |
| 873 | | | | | | | |
| 874 | 033000 <i>CONCRETE</i> | | | | | | |
| 875 | Exposed concrete with hardener; EXP-C | 21,410 | sf | 2.50 | 53,525 | | |
| 876 | | | | | | | |
| 877 | 033650 <i>CONCRETE FINISHES</i> | | | | | | |
| 878 | Polished stained concrete; AFC-1 | 27,529 | sf | 12.00 | 330,348 | | |
| 879 | Polished unstained concrete; AFC-2 | 17,705 | sf | 10.00 | 177,050 | | |
| 880 | | | | | | | |
| 881 | 064020 <i>INTERIOR ARCHITECTURAL WOODWORK</i> | | | | | | |
| 882 | Wood base | 350 | lf | 20.00 | 7,000 | | |
| 883 | Wood and resin composite flooring at forum stair platform on 2nd floor | 300 | sf | 35.00 | 10,500 | | |
| 884 | | | | | | | |
| 885 | 090002 <i>TILE</i> | | | | | | |
| 886 | Marble threshold at gang bathrooms | 28 | loc | 150.00 | 4,200 | | |
| 887 | | | | | | | |
| 888 | 090005 <i>RESILIENT FLOORS</i> | | | | | | |
| 889 | MCT (includes floor prep + premium adhesive) | 219,651 | sf | 5.50 | 1,208,081 | | |
| 890 | MCS (includes floor prep + premium adhesive) | 4,680 | sf | 5.75 | 26,910 | | |
| 891 | Premium for water jetted graphics at corridor locations (A2.0C) | 1,080 | sf | 10.00 | 10,800 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 892 | Interlocking rubber floor tile 3/8" thick; RAF-2 | 3,070 | sf | 10.00 | 30,700 | | |
| 893 | Resilient Base | 36,217 | lf | 3.50 | 126,760 | | |
| 894 | Moisture mitigation | 219,651 | sf | | NR | | |
| 895 | | | | | | | |
| 896 | 096560 ATHLETIC + WOOD FLOORING | | | | | | |
| 897 | Vinyl athletic flooring - Taraflex sport M plus; RAF-1 | 1,460 | sf | 12.20 | 17,812 | | |
| 898 | Poured seamless sports flooring; RAF-3 | 9,920 | sf | 13.50 | 133,920 | | |
| 899 | Wood athletic flooring; WAF | 16,070 | sf | 18.00 | 289,260 | | |
| 900 | Stage wood flooring | 5,270 | sf | 24.00 | 126,480 | | |
| 901 | Moisture mitigation at rubber | 12,990 | sf | 5.00 | 64,950 | | |
| 902 | Moisture mitigation at wood | 16,070 | sf | 3.00 | 48,210 | | |
| 903 | Ventilating cove base | 1,016 | lf | 10.00 | 10,160 | | |
| 904 | | | | | | | |
| 905 | 096700 FLUID APPLIED FLOORING | | | | | | |
| 906 | Poured resinous flooring + cove base | 12,965 | sf | 14.50 | 187,993 | | |
| 907 | Epoxy terrazzo ILO polished stained concrete at spine | | sf | 40.00 | Alternate | | |
| 908 | | | | | | | |
| 909 | 096820 CARPETING | | | | | | |
| 910 | Carpet tile | 19,464 | sf | 6.25 | 121,650 | | |
| 911 | Broadloom carpet at auditorium aisles | 4,550 | sf | 7.00 | 31,850 | | |
| 912 | Broadloom carpet at D-lab stepped risers and ramp | 1,863 | sf | 7.00 | 13,041 | | |
| 913 | Moisture mitigation at carpet | 25,877 | sf | 4.00 | 103,508 | | |
| 914 | SUBTOTAL | | | | | 3,543,308 | |
| 915 | | | | | | | |
| 916 | C3030 CEILING FINISHES | | | | | | |
| 917 | | | | | | | |
| 918 | 015200 TRADE SUPPORT | | | | | | |
| 919 | Staging | 1 | ls | 200,000.00 | 200,000 | | |
| 920 | | | | | | | |
| 921 | 057500 DECORATIVE FORMED METAL | | | | | | |
| 922 | 1" deep painted aluminum grille on 3/4" plywood over steel decking at top of vestibule, grille to be divided into removable sections as shown, grille to be by grainger | 835 | sf | 55.00 | 45,925 | | |
| 923 | | | | | | | |
| 924 | 064020 INTERIOR ARCHITECTURAL WOODWORK | | | | | | |
| 925 | Maple wood grille with backer at Auditorium ceilings; Armstrong woodworks grille (A8.7.3) 5 blade panels | 1,095 | sf | 55.00 | 60,225 | | |
| 926 | Maple wood grille with backer at Auditorium ceilings; Armstrong woodworks grille (A8.7.3) 7 blade panels | 1,355 | sf | 65.00 | 88,075 | | |
| 927 | Maple wood grille with backer at Auditorium ceilings; Armstrong woodworks grille (A8.7.3) 9 blade panels | 1,135 | sf | 75.00 | 85,125 | | |
| 928 | Maple wood grille with backer at Auditorium ceilings - angled edge condition; Armstrong woodworks grille (A8.7.3) | 585 | sf | 75.00 | 43,875 | | |
| 929 | | | | | | | |
| 930 | 090003 ACOUSTICAL TILE | | | | | | |
| 931 | ACT 2 x 2 - Armstrong Calla Square Lay in; C1A | 15,140 | sf | 7.00 | 105,980 | | |
| 932 | ACT 2 x 4 - Armstrong Calla Square Lay in; C1A | 160,240 | sf | 6.00 | 961,440 | | |
| 933 | ACT 2 x 6 - Armstrong Ultima square lay in; C1B | 28,295 | sf | 8.00 | 226,360 | | |
| 934 | ACT 2 x 6 staggered - Armstrong Ultima square lay in; C1B | 56,180 | sf | 9.00 | 505,620 | | |
| 935 | ACT 2 x 6 - Armstrong Optima square lay in; C1C | 4,120 | sf | 8.50 | 35,020 | | |
| 936 | ACT 2 x 6 staggered - Armstrong Optima square lay in; C1C | 6,960 | sf | 10.50 | 73,080 | | |
| 937 | ACT 2 x 2 - Armstrong Calla Square lay in ; C1D black tile and grid | 290 | sf | 7.00 | 2,030 | | |
| 938 | ACT 2 x 4 - Armstrong Ultima Health Zone; C1E washable | 4,510 | sf | 6.50 | 29,315 | | |
| 939 | ACT 2 x 2; C1F | 2,440 | sf | 4.00 | 9,760 | | |
| 940 | ACT 2 x 4; C1F | 6,540 | sf | 3.50 | 22,890 | | |
| 941 | ACT 4 x 4 - Armstrong Optima Square lay in; C1G | 3,468 | sf | 6.50 | 22,542 | | |
| 942 | ACT 2 x 4 - Armstrong Fine Fissure Lay in; C1H | 13,265 | sf | 6.00 | 79,590 | | |
| 943 | Felt baffle system at corridors, Turf Datum ceiling baffle; C4A (material only quote) | 4,850 | lf | 55.00 | 266,750 | | |
| 944 | Felt baffle system at corridors, Turf Datum ceiling baffle; C4A (install including black iron, threaded rod, and slab anchors) | 4,850 | lf | 30.00 | 145,500 | | |
| 945 | Wood baffle system at corridors; Armstrong Woodworks Solo Baffles, PS BM White Maple with clear coat; C4B | 4,810 | lf | 75.00 | 360,750 | | |
| 946 | Wood veneer plank ceiling system - C6 | 1,095 | sf | 40.00 | 43,800 | | |
| 947 | Axiom perimeter trim at wood and ACT clouds | 1,030 | lf | 20.00 | 20,600 | | |
| 948 | Extruded aluminum light ledge | 6,000 | lf | 20.00 | 120,000 | | |
| 949 | 3D solid felt ceiling grid tiles, turf crease tiles; C5A (material only quote) | 1 | ls | 46,676.00 | 46,676 | | |
| 950 | 3D open felt ceiling grid tile, turf slice tiles; C5B (material only quote) | 1 | ls | 16,450.00 | 16,450 | | |
| 951 | Install C5A & C5B including supplying 2x2 grid | 8,205 | sf | 5.00 | 41,025 | | |
| 952 | | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|-----|--------|---|--------|----|-------|-----------|--|
| 953 | 090007 | PAINTING | | | | | |
| 954 | | Paint to GWB ceilings | 57,607 | sf | 1.00 | 57,607 | |
| 955 | | Paint to exposed K13 | 15,600 | sf | 2.50 | NR | |
| 956 | | Paint to exposed MEP and deck; EXP | 5,650 | sf | 2.50 | 14,125 | |
| 957 | | Paint to exposed MEP and deck at gym, stage and auditorium; EXP | 35,083 | sf | 3.00 | 105,249 | |
| 958 | | Paint to exposed MEP, deck to remain unpainted; EXP-U | 6,430 | sf | 1.50 | 9,645 | |
| 959 | 092900 | GYPSUM BOARD ASSEMBLIES | | | | | |
| 960 | | GWB ceiling | 4,275 | sf | 15.00 | 64,125 | |
| 961 | | Acoustically isolated suspended gypsum board; C2B | 14,375 | sf | 22.00 | 316,250 | |
| 963 | | GWB ceiling sloped to underside of select stairs and balcony | 4,735 | sf | 17.00 | 80,495 | |
| 964 | | GWB soffits - vertical | 31,965 | sf | 16.00 | 511,440 | |
| 965 | | GWB soffits - horizontal | 16,632 | sf | 15.00 | 249,480 | |
| 966 | | Extruded aluminum indirect light ledge; A3.7 | 1,040 | lf | 23.00 | 23,920 | |
| 967 | | | | | | | |
| 968 | 098400 | SOUND ABSORBING PANELS | | | | | |
| 969 | | K13 spray insulation - custom color - black & white ; C3 | 15,600 | sf | 6.50 | 101,400 | |
| 970 | | Geometric sound diffuser panels at band and chorus | 1,472 | sf | 40.00 | 58,880 | |
| 971 | | Curved auditorium clouds with fiber resin gelcoat | 270 | sf | 95.00 | 25,650 | |
| 972 | | 2" reflective black ceiling panels behind wood grille ceiling panels at auditorium; Type A; A8.7.3 | 1,470 | sf | 20.00 | 29,400 | |
| 973 | | 2" absorbtive black architectural fiberglass boards behind wood grille ceiling panels at auditorium; Type B AWP-3; A8.7.3 | 1,475 | sf | 20.00 | 29,500 | |
| 974 | | SUBTOTAL | | | | 5,335,569 | |

| | |
|---------------------------|--------------|
| TOTAL - INTERIOR FINISHES | \$12,723,601 |
|---------------------------|--------------|

D10 CONVEYING SYSTEMS

D1010 ELEVATOR

| | | | | | | | |
|-----|--|--|---|----|------------|---------|--|
| 983 | | Machine-room-less, gearless traction elevators | | | | | |
| 984 | | Elevator 3; 3 stop; 2 sided opening | 1 | ea | 165,000.00 | 165,000 | |
| 985 | | Elevator 2 ; 4 stop | 1 | ea | 180,000.00 | 180,000 | |
| 986 | | Elevator 1; 6 stop | 1 | ea | 300,000.00 | 300,000 | |
| 987 | | Lift at Forum stair | 1 | ea | 35,000.00 | 35,000 | |
| 988 | | SUBTOTAL | | | | 680,000 | |

| | |
|---------------------------|-----------|
| TOTAL - CONVEYING SYSTEMS | \$680,000 |
|---------------------------|-----------|

D20 PLUMBING

D20 PLUMBING, GENERALLY

| | | | | | | | |
|------|--|---|----|----|-----------|---------|--|
| 996 | | Electric domestic HW heater, 99kW 250 gal | 2 | ea | 24,000.00 | 48,000 | |
| 997 | | DHW preheat storage tank 300 gallons | 2 | ea | 15,000.00 | 30,000 | |
| 998 | | Electric domestic HW heater, 63kW 250 gal | 1 | ea | 20,000.00 | 20,000 | |
| 999 | | DHW preheat storage tank 215 gallons | 1 | ea | 13,000.00 | 13,000 | |
| 1000 | | Electric domestic HW heater, 18kw 120 gal | 1 | ea | 8,500.00 | 8,500 | |
| 1001 | | Electric domestic HW heater, 9kw 20 gal | 1 | ea | 4,200.00 | 4,200 | |
| 1002 | | Electric domestic HW heater, 6kw 20 gal | 2 | ea | 3,800.00 | 7,600 | |
| 1003 | | Electric domestic HW heater, 3kw 10 gal | 1 | ea | 2,700.00 | 2,700 | |
| 1004 | | Instantaneous electric water heater | 17 | ea | 800.00 | 13,600 | |
| 1005 | | Expansion tank | 7 | ea | 3,500.00 | 24,500 | |
| 1006 | | Hot water circulator pump assembly | 9 | ea | 1,400.00 | 12,600 | |
| 1007 | | Main water mixing valve station | 1 | ea | 4,800.00 | 4,800 | |
| 1008 | | Tempered water mixing valve station | 1 | ea | 3,600.00 | 3,600 | |
| 1009 | | Tempered water circulator pump assembly | 1 | ea | 1,400.00 | 1,400 | |
| 1010 | | Main water meter and PRV assembly, primary and backup | 2 | ea | 6,300.00 | 12,600 | |
| 1011 | | Irrigation water meter and RPPB assembly | 2 | ea | 4,300.00 | 8,600 | |
| 1012 | | Domestic water sub-meter assembly | 10 | ea | 650.00 | 6,500 | |
| 1013 | | Connection to natural gas meter | 1 | ea | 1,400.00 | 1,400 | |
| 1014 | | Natural gas sub-meter assembly | 1 | ea | 850.00 | 850 | |
| 1015 | | Kitchen water sub-meter assembly | 1 | ea | 1,200.00 | 1,200 | |
| 1016 | | 6" Reduce pressure backflow preventer, main service | | | | NIC | |
| 1017 | | 4" Reduce pressure backflow preventer, backup service | 1 | ea | 2,900.00 | 2,900 | |
| 1018 | | 3/4" Backflow preventer, HVAC/kitchen/misc | 8 | ea | 1,600.00 | 12,800 | |
| 1019 | | Roof drain | 91 | ea | 1,200.00 | 109,200 | |
| 1020 | | Area drain | 4 | ea | 1,050.00 | 4,200 | |
| 1021 | | Floor drain | 43 | ea | 675.00 | 29,025 | |
| 1022 | | Kitchen floor drain | 2 | ea | 800.00 | 1,600 | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|--------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1023 | Kitchen floor sink | 12 | ea | 2,500.00 | 30,000 | | |
| 1024 | Kitchen floor trough installation | 2 | ea | 800.00 | 1,600 | | |
| 1025 | Trench drain | 50 | lf | 75.00 | 3,750 | | |
| 1026 | Trap primer | 21 | ea | 1,050.00 | 22,050 | | |
| 1027 | Freezeproof wall hydrant | 17 | ea | 325.00 | 5,525 | | |
| 1028 | Hose bibb | 29 | ea | 225.00 | 6,525 | | |
| 1029 | Interior grease interceptor | 2 | ea | 3,500.00 | 7,000 | | |
| 1030 | Exterior grease interceptor (by division 33) | | | | by others | | |
| 1031 | Air compressor with tank, filter, ref dryer (maker/wood shop) | 1 | ea | 16,000.00 | 16,000 | | |
| 1032 | Acid neutralization tank w/ pH monitor | 1 | ea | 48,000.00 | 48,000 | | |
| 1033 | Rough-in & connection to kitchen equipment | 57 | conn | 750.00 | 42,750 | | |
| 1034 | <u>Plumbing Fixtures</u> | | | | | | |
| 1035 | Water closet | 42 | ea | 1,525.00 | 64,050 | | |
| 1036 | Water closet ADA | 73 | ea | 1,550.00 | 113,150 | | |
| 1037 | Water closet Child | 11 | ea | 1,350.00 | 14,850 | | |
| 1038 | Urinal | 6 | ea | 1,575.00 | 9,450 | | |
| 1039 | Urinal ADA | 14 | ea | 1,600.00 | 22,400 | | |
| 1040 | Lavatory ADA wall hung | 132 | ea | 1,400.00 | 184,800 | | |
| 1041 | Large art room sink with sediment trap (multi faucet) | 8 | ea | 5,000.00 | 40,000 | | |
| 1042 | Shower 36x36 | 6 | ea | 1,650.00 | 9,900 | | |
| 1043 | Shower ADA 36x36 | 7 | ea | 3,600.00 | 25,200 | | |
| 1044 | Mop sink with BFP | 18 | ea | 1,425.00 | 25,650 | | |
| 1045 | Drinking fountain; bi-level w/ bottle fill | 8 | ea | 3,850.00 | 30,800 | | |
| 1046 | Drinking fountain; single-level | 13 | ea | 1,850.00 | 24,050 | | |
| 1047 | Bottle filler | 16 | ea | 1,400.00 | 22,400 | | |
| 1048 | Art sink with trap | 4 | ea | 1,850.00 | 7,400 | | |
| 1049 | Sink ADA countertop | 58 | ea | 1,275.00 | 73,950 | | |
| 1050 | FACS classroom sink | 9 | ea | 1,625.00 | 14,625 | | |
| 1051 | Science room sink (integral sink by others) | 69 | ea | 600.00 | 41,400 | | |
| 1052 | ES/EW Emergency shower/eyewash | 16 | ea | 3,450.00 | 55,200 | | |
| 1053 | Laundry box | 3 | ea | 350.00 | 1,050 | | |
| 1054 | Whirlpool connection | 1 | ea | 900.00 | 900 | | |
| 1055 | Ice maker connection | 3 | ea | 325.00 | 975 | | |
| 1056 | Washer outlet box | 3 | ea | 350.00 | 1,050 | | |
| 1057 | Condensate drain receptor | 10 | ea | 300.00 | 3,000 | | |
| 1058 | <u>Domestic/Tempered/NP Water Piping</u> | | | | | | |
| 1059 | Copper pipe type L with fittings & hangers | 26,935 | lf | 36.00 | 969,660 | | |
| 1060 | Valves & accessories | 1 | ls | 145,449.00 | 145,449 | | |
| 1061 | <u>Pipe insulation</u> | | | | | | |
| 1062 | Pipe insulation | 26,935 | lf | 10.00 | 269,350 | | |
| 1063 | <u>Sanitary W&V UG, SV Cast Iron Pipe</u> | | | | | | |
| 1064 | 6" SV Cast iron pipe with fittings | 670 | lf | 47.00 | 31,490 | | |
| 1065 | 4" SV Cast iron pipe with fittings | 3,710 | lf | 31.00 | 115,010 | | |
| 1066 | <3" SV Cast iron pipe with fittings | 960 | lf | 24.00 | 23,040 | | |
| 1067 | <u>Sanitary W&V AG, Hubless Cast Iron Pipe</u> | | | | | | |
| 1068 | Cast iron pipe with fittings & hangers | 11,590 | lf | 45.00 | 521,550 | | |
| 1069 | <u>Storm Drainage UG, SV Cast Iron Pipe</u> | | | | | | |
| 1070 | 15" SV Cast iron pipe with fittings | 280 | lf | 190.00 | 53,200 | | |
| 1071 | 12" SV Cast iron pipe with fittings | 215 | lf | 135.00 | 29,025 | | |
| 1072 | 10" SV Cast iron pipe with fittings | 340 | lf | 106.00 | 36,040 | | |
| 1073 | 8" SV Cast iron pipe with fittings | 515 | lf | 72.00 | 37,080 | | |
| 1074 | 6" SV Cast iron pipe with fittings | 530 | lf | 48.00 | 25,440 | | |
| 1075 | 4" SV Cast iron pipe with fittings | 215 | lf | 31.00 | 6,665 | | |
| 1076 | <u>Storm Drainage AG, Hubless Cast Iron Pipe</u> | | | | | | |
| 1077 | Cast iron pipe with fittings & hangers | 5,180 | lf | 55.00 | 284,900 | | |
| 1078 | Pipe insulation on horizontal runs | 2,600 | lf | 17.00 | 44,200 | | |
| 1079 | Storm outlets & accessories | 1 | ls | 8,500.00 | 8,500 | | |
| 1080 | <u>Acid Waste AG, Polypropylene</u> | | | | | | |
| 1081 | Acid waste pipe with fittings | 5,610 | lf | 85.00 | 476,850 | | |
| 1082 | <u>Natural Gas Piping</u> | | | | | | |
| 1083 | Natural gas pipe with fittings & hangers | 2,410 | lf | 41.00 | 98,810 | | |
| 1084 | Science lab gas valve shutoff box | 6 | ea | 450.00 | 2,700 | | |
| 1085 | Science lab gas turrets | 52 | ea | 450.00 | 23,400 | | |
| 1086 | <u>Compressed Air Piping</u> | | | | | | |
| 1087 | CA pipe with fittings & hangers (work shop) | 490 | lf | 35.00 | 17,150 | | |
| 1088 | Outlets, valves & accessories | 1 | ls | 9,000.00 | 9,000 | | |
| 1089 | <u>Miscellaneous</u> | | | | | | |
| 1090 | Demo - drain and make safe | 1 | ls | 40,000.00 | 40,000 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|--------|------|--------------|---------------|--------------|--------------------|
| NEW CONSTRUCTION | | | | | | | |
| 1091 | System testing, flushing, disinfection | 1 | ls | 21,000.00 | 21,000 | | |
| 1092 | Coring, cutting, sleeves & fire stopping | 1 | ls | 62,500.00 | 62,500 | | |
| 1093 | Seismic restraints and structural steel comp. | 1 | ls | 36,000.00 | 36,000 | | |
| 1094 | Hydraulic lifts/rigging | 1 | ls | 80,000.00 | 80,000 | | |
| 1095 | Shop drawings / BIM / ENG Support / As-Built | 1 | ls | 165,000.00 | 165,000 | | |
| 1096 | Commissioning Support | 1 | ls | 29,000.00 | 29,000 | | |
| 1097 | Fees & permits | 1 | ls | 30,000.00 | Waived | | |
| 1098 | SUBTOTAL | | | | | 5,016,834 | |
| 1099 | | | | | | | |
| 1100 | TOTAL - PLUMBING | | | | | | \$5,016,834 |
| 1101 | | | | | | | |
| 1102 | | | | | | | |
| 1103 | D30 HVAC | | | | | | |
| 1104 | | | | | | | |
| 1105 | D30 HVAC, GENERALLY | | | | | | |
| 1106 | <u>Central plant equipment</u> | | | | | | |
| 1107 | ACHP-1 (10 - 30 ton modules); air-cooled heat pump with simultaneous heating and cooling (w/ noise reducing package) | 1 | ea | 820,000.00 | 820,000 | | |
| 1108 | ACHP-2,3 (5 - 30 ton modules); air-cooled heat pump with simultaneous heating and cooling (w/ noise reducing package) | 2 | ea | 410,000.00 | 820,000 | | |
| 1109 | ACH-1,2 (3 - 60 ton modules); air-cooled chiller with noise reducing package | 2 | ea | 282,000.00 | 564,000 | | |
| 1110 | B-1,2 Hot water boiler, electric 490 KW | 2 | ea | 45,000.00 | 90,000 | | |
| 1111 | CHW buffer tank 700 gallon | 4 | ea | 6,000.00 | 24,000 | | |
| 1112 | Plate & frame heat exchanger 1656 MBH | 2 | ea | 13,000.00 | 26,000 | | |
| 1113 | Expansion tank | 10 | ea | 4,000.00 | 40,000 | | |
| 1114 | Air separator | 4 | ea | 3,500.00 | 14,000 | | |
| 1115 | Glycol feed system | 4 | ea | 7,500.00 | 30,000 | | |
| 1116 | Glycol | 12,500 | gal | 15.00 | 187,500 | | |
| 1117 | Chemical pot feeder | 4 | ea | 800.00 | 3,200 | | |
| 1118 | <u>Pumps</u> | | | | | | |
| 1119 | HWP-1,2,3 Hot water loop pump Bldg D/E (ACHP) | 3 | ea | 13,500.00 | 40,500 | | |
| 1120 | HWP-4,5,6 Hot water loop pump Bldg A/B (ACHP) | 3 | ea | 13,500.00 | 40,500 | | |
| 1121 | CHWP-1,2,3 Chilled water loop pump Bldg D/E (ACHP) | 3 | ea | 16,500.00 | 49,500 | | |
| 1122 | CHWP-4,5,6 Chilled water loop pump Bldg A/B (ACHP) | 3 | ea | 16,500.00 | 49,500 | | |
| 1123 | CHWP-7,8 Chilled water loop pump Bldg D/E (ACH) | 2 | ea | 15,000.00 | 30,000 | | |
| 1124 | CHWP-9,10 Chilled water loop pump Bldg A/B (ACH) | 2 | ea | 15,000.00 | 30,000 | | |
| 1125 | BP-1,2 Boiler pump Bldg D/E | 2 | ea | 4,500.00 | 9,000 | | |
| 1126 | BP-3,4 Boiler pump Bldg A/B | 2 | ea | 4,500.00 | 9,000 | | |
| 1127 | VFD's | 20 | ea | 4,000.00 | 80,000 | | |
| 1128 | <u>Heating equipment</u> | | | | | | |
| 1129 | Unit heater, electric | 3 | ea | 950.00 | 2,850 | | |
| 1130 | Unit heater, HW | 2 | ea | 1,000.00 | 2,000 | | |
| 1131 | Cabinet unit heater HW, electric | 8 | ea | 1,150.00 | 9,200 | | |
| 1132 | Cabinet unit heater, HW | 7 | ea | 1,100.00 | 7,700 | | |
| 1133 | Panel radiator, wall | 152 | lf | 300.00 | 45,600 | | |
| 1134 | Radiant heating/cooling floor tubing | 14,220 | sf | 14.00 | 199,080 | | |
| 1135 | Radiant heating/cooling manifolds | 11 | ea | 1,800.00 | 19,800 | | |
| 1136 | <u>Cooling equipment</u> | | | | | | |
| 1137 | RFCU- Refrigerant fan coil unit | 153 | ea | 2,900.00 | 443,700 | | |
| 1138 | HRCU- Heat recovery condensing units | 211 | tons | 1,800.00 | 379,800 | | |
| 1139 | Branch controller box | 10 | ea | 2,500.00 | 25,000 | | |
| 1140 | <u>Heat recovery condensing unit</u> | | | | | | |
| 1141 | HRCU-ERU-1 | 64 | tons | 2,000.00 | 128,000 | | |
| 1142 | HRCU-ERU-2 | 24 | tons | 2,000.00 | 48,000 | | |
| 1143 | HRCU-ERU-3 | 8 | tons | 2,000.00 | 16,000 | | |
| 1144 | HRCU-ERU-4 | 48 | tons | 2,000.00 | 96,000 | | |
| 1145 | HRCU-HRU-3: (5 - 10 ton compressors) | 50 | tons | 2,000.00 | 100,000 | | |
| 1146 | HRCU-HRU-6: (6 compressors) | 48 | tons | 2,000.00 | 96,000 | | |
| 1147 | HRCU-HRU-7: (2 compressors) | 18 | tons | 2,000.00 | 36,000 | | |
| 1148 | HRCU-HRU-8: (3 compressors) | 28 | tons | 2,000.00 | 56,000 | | |
| 1149 | HRCU-HRU-9: (4 compressors) | 34 | tons | 2,000.00 | 68,000 | | |
| 1150 | HRCU-HRU-10: (1 - 10 ton compressors) | 10 | tons | 2,000.00 | 20,000 | | |
| 1151 | HRCU-HRU-11: (6 - 10 ton compressors) | 60 | tons | 2,000.00 | 120,000 | | |
| 1152 | HRCU-HRU-12: (6 compressors) | 52 | tons | 2,000.00 | 104,000 | | |
| 1153 | HRCU-HRU-13: (6 compressors) | 52 | tons | 2,000.00 | 104,000 | | |
| 1154 | HRCU-HRU-14: (6 compressors) | 52 | tons | 2,000.00 | 104,000 | | |
| 1155 | HRCU-HRU-15: (3 compressors) | 32 | tons | 2,000.00 | 64,000 | | |
| 1156 | <u>Air distribution</u> | | | | | | |
| 1157 | <u>Air Handling Unit</u> | | | | | | |
| 1158 | ERU-1: 12000 CFM with DX, Elec Ht, ERW | 12,000 | cfm | 17.00 | 204,000 | | |
| 1159 | ERU-2: 4000 CFM with DX, Elec Ht, ERW | 4,000 | cfm | 18.00 | 72,000 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1160 | ERU-3: 1100 CFM with DX, Elec Ht, ERW | 1,100 | cfm | 25.00 | 27,500 | | |
| 1161 | ERU-4: 8000 CFM with DX, Elec Ht, ERW | 8,000 | cfm | 17.00 | 136,000 | | |
| 1162 | HRU-1: 18000 CFM with CHW, HW & ERW | 18,000 | cfm | 20.00 | 360,000 | | |
| 1163 | HRU-2: 18000 CFM with CHW, HW & ERW | 18,000 | cfm | 20.00 | 360,000 | | |
| 1164 | HRU-3: 3850 CFM with DX, Elec Ht, ERW | 3,850 | cfm | 18.00 | 69,300 | | |
| 1165 | HRU-4: 18000 CFM with CHW, HW & ERW | 18,000 | cfm | 20.00 | 360,000 | | |
| 1166 | HRU-5: 18000 CFM with CHW, HW & ERW | 18,000 | cfm | 20.00 | 360,000 | | |
| 1167 | HRU-6: 11650 CFM with DX, Elec Ht, ERW | 11,650 | cfm | 17.00 | 198,050 | | |
| 1168 | HRU-7: 4410 CFM with DX, Elec Ht, ERW | 4,410 | cfm | 18.00 | 79,380 | | |
| 1169 | HRU-8: 5690 CFM with DX, Elec Ht, ERW | 5,690 | cfm | 18.00 | 102,420 | | |
| 1170 | HRU-9: 5250 CFM with DX, Elec Ht, ERW | 5,250 | cfm | 18.00 | 94,500 | | |
| 1171 | HRU-10: 6250 CFM with DX, Elec Ht, ERW | 6,250 | cfm | 18.00 | 112,500 | | |
| 1172 | HRU-11: 13550 CFM with DX, Elec Ht, ERW | 13,550 | cfm | 17.00 | 230,350 | | |
| 1173 | HRU-12: 10950 CFM with DX, Elec Ht, ERW | 10,950 | cfm | 19.00 | 208,050 | | |
| 1174 | HRU-13: 10950 CFM with DX, Elec Ht, ERW | 10,950 | cfm | 19.00 | 208,050 | | |
| 1175 | HRU-14: 12000 CFM with DX, Elec Ht, ERW | 12,000 | cfm | 19.00 | 228,000 | | |
| 1176 | HRU-15: 6100 CFM with DX, Elec Ht, ERW | 6,100 | cfm | 17.00 | 103,700 | | |
| 1177 | MAU-1: Kitchen MUA 5500 CFM with CHW, HW | 5,500 | cfm | 12.00 | 66,000 | | |
| 1178 | Rooftop unit curbs | 20 | ea | 6,000.00 | 120,000 | | |
| 1179 | FCU- Fan coil unit with CHW | 44 | ea | 5,500.00 | 242,000 | | |
| 1180 | FCB- Fan powered VAV coil box with CHW, HW | 150 | ea | 6,000.00 | 900,000 | | |
| 1181 | <u>Fans</u> | | | | | | |
| 1182 | General exhaust fan | 1 | ea | 6,000.00 | 6,000 | | |
| 1183 | Kitchen hood grease exhaust fan | 1 | ea | 13,000.00 | 13,000 | | |
| 1184 | Dishwasher exhaust fan | 1 | ea | 3,500.00 | 3,500 | | |
| 1185 | Kiln exhaust fan | 1 | ea | 3,000.00 | 3,000 | | |
| 1186 | Mech/fp exhaust fan | 2 | ea | 3,800.00 | 7,600 | | |
| 1187 | Maker, shop, cad, storage | 5 | ea | 1,200.00 | 6,000 | | |
| 1188 | Dryer EF | 4 | ea | 500.00 | 2,000 | | |
| 1189 | Art storage | 1 | ea | 2,500.00 | 2,500 | | |
| 1190 | FACS EF | 3 | ea | 1,000.00 | 3,000 | | |
| 1191 | Sub slab vapor mitigation fan | 18 | ea | 1,200.00 | 21,600 | | |
| 1192 | HVLS fan 18' diameter | 4 | ea | 10,400.00 | 41,600 | | |
| 1193 | <u>Sheet metal & Accessories</u> | | | | | | |
| 1194 | Galvanized ductwork with fittings & hangers | 415,000 | lbs | 14.00 | 5,810,000 | | |
| 1195 | Welded black iron grease exhaust ductwork | 9,500 | lbs | 17.00 | 161,500 | | |
| 1196 | Dishwasher exhaust stainless steel | 1,800 | lbs | 19.00 | 34,200 | | |
| 1197 | Lab exhaust stainless steel | 2,500 | lbs | 19.00 | 47,500 | | |
| 1198 | Dust collector flanged/gasket 15" pressure class duct | 1 | ls | 21,000.00 | 21,000 | | |
| 1199 | Sub slab vapor mitigation duct | 1 | ls | 35,000.00 | 35,000 | | |
| 1200 | Duct insulation | 235,000 | sf | 4.75 | 1,116,250 | | |
| 1201 | Firewrap kitchen duct insulation | 3,000 | sf | 18.00 | 54,000 | | |
| 1202 | Registers, grilles & diffusers | 1,730 | ea | 150.00 | 259,500 | | |
| 1203 | Sound attenuators | 39 | ea | 6,000.00 | 234,000 | | |
| 1204 | VAV box with electric reheat coil | 96 | ea | 1,200.00 | 115,200 | | |
| 1205 | VAV box with hot water reheat coil | 37 | ea | 1,300.00 | 48,100 | | |
| 1206 | VAV box, return/exhaust | 235 | ea | 1,000.00 | 235,000 | | |
| 1207 | Fan powered box with HW reheat coil | 32 | ea | 2,300.00 | 73,600 | | |
| 1208 | Dust collector 4400 CFM, fabric type with funnel bottom | 1 | ea | 27,000.00 | 27,000 | | |
| 1209 | Terminal air filter in Art room | 2 | ea | 1,500.00 | 3,000 | | |
| 1210 | Fire/smoke dampers | 1 | ls | 100,000.00 | 100,000 | | |
| 1211 | Miscellaneous sheet metal accessories | 408,600 | sf | 0.25 | 102,150 | | |
| 1212 | <u>Piping</u> | | | | | | |
| 1213 | <u>Hot Water Pipe</u> | | | | | | |
| 1214 | Hot water piping | 23,670 | lf | 38.00 | 899,460 | | |
| 1215 | Misc valves & accessories | 1 | ls | 89,946.00 | 89,946 | | |
| 1216 | <u>Chilled Water Pipe</u> | | | | | | |
| 1217 | Chilled water piping | 19,210 | lf | 46.00 | 883,660 | | |
| 1218 | Misc valves & accessories | 1 | ls | 88,366.00 | 88,366 | | |
| 1219 | <u>Refrigerant Piping</u> | | | | | | |
| 1220 | RFCU refrigerant ACR tubing with fittings & hangers | 23,440 | lf | 26.00 | 609,440 | | |
| 1221 | ERU/HRU refrigerant tubing with fittings & hangers | 7,470 | lf | 42.00 | 313,740 | | |
| 1222 | <u>Condensate Drain Piping</u> | | | | | | |
| 1223 | Condensate piping with fittings & hangers (for ERU, HRU, FCU, RFCU, FCB) | 7,000 | lf | 33.00 | 231,000 | | |
| 1224 | <u>Equipment Piping Hookup:</u> | | | | | | |
| 1225 | Air cooled heat pump | 3 | ea | 11,000.00 | 33,000 | | |
| 1226 | Air cooled chiller | 2 | ea | 7,000.00 | 14,000 | | |
| 1227 | Boiler | 2 | ea | 6,500.00 | 13,000 | | |
| 1228 | Pump | 20 | ea | 3,200.00 | 64,000 | | |
| 1229 | HRU (CHW, HW) | 4 | ea | 4,000.00 | 16,000 | | |
| 1230 | Kitchen MUA (CHW, HW) | 1 | ea | 3,500.00 | 3,500 | | |
| 1231 | Fan coil unit (CHW/HW) | 44 | ea | 1,900.00 | 83,600 | | |
| 1232 | Fan coil box (CHW/HW) | 150 | ea | 1,900.00 | 285,000 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|---------------|--------------|---------------------|
| NEW CONSTRUCTION | | | | | | | |
| 1233 | Radiant manifold (CHW/HW) | 11 | ea | 1,900.00 | 20,900 | | |
| 1234 | VAV box (HW) | 37 | ea | 1,000.00 | 37,000 | | |
| 1235 | Fan powered box (HW) | 32 | ea | 1,000.00 | 32,000 | | |
| 1236 | CUH & UH | 9 | ea | 500.00 | 4,500 | | |
| 1237 | Panel radiator | 18 | ea | 500.00 | 9,000 | | |
| 1238 | <u>Piping Insulation</u> | | | | | | |
| 1239 | Piping insulation | 80,790 | lf | 10.00 | 807,900 | | |
| 1240 | <u>Controls (DDC)</u> | | | | | | |
| 1241 | Automatic temperature controls DDC | 408,600 | sf | 6.25 | 2,553,750 | | |
| 1242 | Add for additional graphics | 1 | ls | 50,000.00 | 50,000 | | |
| 1243 | <u>Balancing</u> | | | | | | |
| 1244 | System testing & balancing | 408,600 | sf | 1.00 | 408,600 | | |
| 1245 | <u>Miscellaneous</u> | | | | | | |
| 1246 | Demo - drain and make safe | 1 | ls | 200,000.00 | 200,000 | | |
| 1247 | System testing and flushing | 1 | ls | 100,000.00 | 100,000 | | |
| 1248 | Coring, cutting, sleeves & fire stopping | 1 | ls | 60,000.00 | 60,000 | | |
| 1249 | Seismic Restraints and Structural Steel Comp. | 1 | ls | 149,900.00 | 149,900 | | |
| 1250 | Hydraulic lifts/rigging | 1 | ls | 232,200.00 | 232,200 | | |
| 1251 | Shop drawings / BIM / ENG Support / As-Builts | 1 | ls | 393,500.00 | 393,500 | | |
| 1252 | General conditions | 1 | ls | 385,000.00 | 385,000 | | |
| 1253 | Market adjustment | (1) | ls | 250,000.00 | (250,000) | | |
| 1254 | Commissioning Support | 1 | ls | 100,000.00 | 100,000 | | |
| 1255 | Fees & permits | 1 | ls | 287,850.00 | Waived | | |
| 1256 | SUBTOTAL | | | | | 27,601,992 | |
| 1257 | | | | | | | |
| 1258 | TOTAL - HVAC | | | | | | \$27,601,992 |
| 1259 | | | | | | | |
| 1260 | | | | | | | |
| 1261 | D40 FIRE PROTECTION | | | | | | |
| 1262 | | | | | | | |
| 1263 | D40 FIRE PROTECTION, GENERALLY | | | | | | |
| 1264 | Fire pump, jockey pump, and controllers | 1 | ea | 100,000.00 | 100,000 | | |
| 1265 | 8" Fire protection water service | 2 | ea | 5,500.00 | 11,000 | | |
| 1266 | 8" Double check valve assembly | 1 | ea | 16,500.00 | 16,500 | | |
| 1267 | Wet alarm check valve assembly | 5 | ea | 5,500.00 | 27,500 | | |
| 1268 | Electric bell | 2 | ea | 400.00 | 800 | | |
| 1269 | Fire pump test header | 1 | ea | 2,500.00 | 2,500 | | |
| 1270 | Fire department connection | 2 | ea | 1,500.00 | 3,000 | | |
| 1271 | Dry alarm check valve/inlet PRV for Overhang dry heads | 1 | ea | 6,000.00 | 6,000 | | |
| 1272 | Zone control valve stations | 17 | ea | 2,200.00 | 37,400 | | |
| 1273 | Fire department valve | 39 | ea | 600.00 | 23,400 | | |
| 1274 | Roof mounted FD valve and PIV assembly | 3 | ea | 1,700.00 | 5,100 | | |
| 1275 | Sprinkler heads, wet (incl above auditorium ceiling) | 4,047 | ea | 130.00 | 526,110 | | |
| 1276 | Sprinkler heads, wet with cage (incl under gym bleachers) | 220 | ea | 195.00 | 42,900 | | |
| 1277 | Sprinkler heads, dry (under overhang) | 45 | ea | 130.00 | 5,850 | | |
| 1278 | <1-1/2" branch piping with fittings & hangers | 37,220 | lf | 22.50 | 837,450 | | |
| 1279 | 2"-4" Main piping with fittings & hangers | 10,890 | lf | 36.00 | 392,040 | | |
| 1280 | 6" Main piping with fittings & hangers | 1,485 | lf | 66.00 | 98,010 | | |
| 1281 | 8" Main piping with fittings & hangers | 1,360 | lf | 92.00 | 125,120 | | |
| 1282 | <u>Miscellaneous</u> | | | | | | |
| 1283 | General conditions | 1 | ls | 225,000.00 | 225,000 | | |
| 1284 | System testing and flushing | 1 | ls | 13,600.00 | 13,600 | | |
| 1285 | Coring, cutting, sleeves & fire stopping | 1 | ls | 22,700.00 | 22,700 | | |
| 1286 | Seismic Restraints and Structural Steel Comp. | 1 | ls | 22,700.00 | 22,700 | | |
| 1287 | Hydraulic lifts/rigging | 1 | ls | 63,700.00 | 63,700 | | |
| 1288 | Shop drawings / BIM / ENG Support / As-Builts | 1 | ls | 91,300.00 | 91,300 | | |
| 1289 | Commissioning Support | 1 | ls | 10,300.00 | 10,300 | | |
| 1290 | Fees & permits | 1 | ls | 24,780.00 | Waived | | |
| 1291 | SUBTOTAL | | | | | 2,709,980 | |
| 1292 | | | | | | | |
| 1293 | TOTAL - FIRE PROTECTION | | | | | | \$2,709,980 |
| 1294 | | | | | | | |
| 1295 | | | | | | | |
| 1296 | D50 ELECTRICAL | | | | | | |
| 1297 | | | | | | | |
| 1298 | | | | | | | |
| 1299 | D5010 ELECTRICAL SYSTEMS | | | | | | |
| 1300 | Gear & Distribution | | | | | | |
| 1301 | <u>Normal Power</u> | | | | | | |
| 1302 | 6000A 277/480V switchboard (MSB-PV-BLDG + MSB-PV-SITE + MSB1) | 1 | ls | 310,000.00 | 310,000 | | |
| 1303 | 4000A 277/480V switchboard | 1 | ls | 110,000.00 | 110,000 | | |
| 1304 | 2500A 277/480V switchboard | 1 | ls | 75,000.00 | 75,000 | | |
| 1305 | 1200A 277/480V switchboard | 1 | ea | 49,000.00 | 49,000 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1306 | 1200A 277/480V distribution panelboard | 3 | ea | 25,000.00 | 75,000 | | |
| 1307 | 1000A 277/480V distribution panelboard | 1 | ea | 30,000.00 | 30,000 | | |
| 1308 | 600A 277/480V distribution panelboard | 2 | ea | 16,000.00 | 32,000 | | |
| 1309 | 400A 277/480V distribution panelboard | 3 | ea | 6,500.00 | 19,500 | | |
| 1310 | 225A 277/480V distribution panelboard | 1 | ea | 4,500.00 | 4,500 | | |
| 1311 | 400A 277/480V panelboard | 3 | ea | 3,280.00 | 9,840 | | |
| 1312 | 225A 277/480V panelboard | 19 | ea | 2,700.00 | 51,300 | | |
| 1313 | 100A 277/480V panelboard | 4 | ea | 1,600.00 | 6,400 | | |
| 1314 | 75KVA transformer | 9 | ea | 7,625.00 | 68,625 | | |
| 1315 | 50KVA transformer | 2 | ea | 6,000.00 | 12,000 | | |
| 1316 | 45KVA transformer | 13 | ea | 5,536.00 | 71,968 | | |
| 1317 | 30KVA transformer | 8 | ea | 4,725.00 | 37,800 | | |
| 1318 | 225A 120/208V double tub panelboard | 28 | ea | 5,336.00 | 149,408 | | |
| 1319 | 225A 120/208V panelboard | 6 | ea | 2,670.00 | 16,020 | | |
| 1320 | 200A 120/208V panelboard | 4 | ea | 2,500.00 | 10,000 | | |
| 1321 | 150A 120/208V panelboard | 1 | ea | 2,320.00 | 2,320 | | |
| 1322 | 100A 120/208V panelboard | 27 | ea | 1,600.00 | 43,200 | | |
| 1323 | Power monitoring | 1 | ls | 25,000.00 | 25,000 | | |
| 1324 | 225A disconnect | 1 | ea | 2,000.00 | 2,000 | | |
| 1325 | 100A disconnect | 1 | ea | 950.00 | 950 | | |
| 1326 | 60A disconnect | 2 | ea | 500.00 | 1,000 | | |
| 1327 | Feeders: | | | | | | |
| 1328 | 225A CU feed | 280 | lf | 51.25 | 14,350 | | |
| 1329 | 200A CU feed | 600 | lf | 45.00 | 27,000 | | |
| 1330 | 175A CU feed | 100 | lf | 41.00 | 4,100 | | |
| 1331 | 125A CU feed | 450 | lf | 32.00 | 14,400 | | |
| 1332 | 100A CU feed | 2,500 | lf | 25.00 | 62,500 | | |
| 1333 | 80A CU feed | 100 | lf | 24.00 | 2,400 | | |
| 1334 | 70A CU feed | 440 | lf | 22.00 | 9,680 | | |
| 1335 | 50A CU feed | 250 | lf | 13.50 | 3,375 | | |
| 1336 | 4000A AL feed | 650 | lf | 874.00 | 568,100 | | |
| 1337 | 2500A AL feed | 710 | lf | 546.25 | 387,838 | | |
| 1338 | 1200A AL feed | 1,300 | lf | 282.25 | 366,925 | | |
| 1339 | 1000A AL feed | 70 | lf | 218.50 | 15,295 | | |
| 1340 | 800A AL feed | 310 | lf | 186.60 | 57,846 | | |
| 1341 | 600A AL feed | 270 | lf | 135.50 | 36,585 | | |
| 1342 | 400A AL feed | 1,020 | lf | 94.35 | 96,237 | | |
| 1343 | 225A AL feed | 2,800 | lf | 43.60 | 122,080 | | |
| 1344 | Feeders discount | (1) | ls | 100,000.00 | (100,000) | | |
| 1345 | <u>Emergency power</u> | | | | | | |
| 1346 | 2000KW diesel emergency generator with sound WP cover | 1 | ea | 800,000.00 | 800,000 | | |
| 1347 | 400KW portable emergency generator, per spec (for construction Phasing) | 1 | ls | 25,000.00 | 25,000 | | |
| 1348 | Fuel for testing | 1 | ls | 10,000.00 | 10,000 | | |
| 1349 | Remote annunciator w/controls and E-stop | 1 | ea | 10,000.00 | 10,000 | | |
| 1350 | 400A MTS | 1 | ea | 5,425.00 | 5,425 | | |
| 1351 | 3000A 480/277V automatic transfer switch | 2 | ea | 48,000.00 | 96,000 | | |
| 1352 | 400A 480/277V automatic transfer switch | 2 | ea | 7,980.00 | 15,960 | | |
| 1353 | 3000A 277/480V switchboard | 1 | ea | 66,500.00 | 66,500 | | |
| 1354 | 2500A 277/480V switchboard | 2 | ea | 75,000.00 | 150,000 | | |
| 1355 | 1200A 277/480V switchboard | 1 | ea | 49,000.00 | 49,000 | | |
| 1356 | 800A 277/480V distribution panelboard | 2 | ea | 20,000.00 | 40,000 | | |
| 1357 | 600A 277/480V distribution panelboard | 3 | ea | 16,000.00 | 48,000 | | |
| 1358 | 400A 277/480V distribution panelboard | 10 | ea | 6,500.00 | 65,000 | | |
| 1359 | 400A 277/480V panelboard | 9 | ea | 3,280.00 | 29,520 | | |
| 1360 | 225A 277/480V panelboard | 13 | ea | 2,670.00 | 34,710 | | |
| 1361 | 100A 277/480V panelboard | 16 | ea | 1,600.00 | 25,600 | | |
| 1362 | 175KVA transformer | 1 | ea | 13,000.00 | 13,000 | | |
| 1363 | 150KVA transformer | 1 | ea | 11,610.00 | 11,610 | | |
| 1364 | 112.5KVA transformer | 3 | ea | 9,367.00 | 28,101 | | |
| 1365 | 100KVA transformer | 2 | ea | 8,000.00 | 16,000 | | |
| 1366 | 75KVA transformer | 8 | ea | 7,625.00 | 61,000 | | |
| 1367 | 45KVA transformer | 1 | ea | 5,536.00 | 5,536 | | |
| 1368 | 30KVA transformer | 1 | ea | 4,725.00 | 4,725 | | |
| 1369 | 600A 120/208V distribution panelboard | 2 | ea | 16,000.00 | 32,000 | | |
| 1370 | 400A 120/208V distribution panelboard | 1 | ea | 6,500.00 | 6,500 | | |
| 1371 | 400A 120/208V double tub panelboard | 1 | ea | 6,400.00 | 6,400 | | |
| 1372 | 400A 120/208V panelboard | 1 | ea | 3,280.00 | 3,280 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1373 | 300A 120/208V panelboard | 3 | ea | 300.00 | 900 | | |
| 1374 | 225A 120/208V double tub panelboard | 4 | ea | 5,100.00 | 20,400 | | |
| 1375 | 225A 120/208V panelboard | 19 | ea | 2,670.00 | 50,730 | | |
| 1376 | 150A 120/208V panelboard | 2 | ea | 2,200.00 | 4,400 | | |
| 1377 | 100A 120/208V panelboard | 20 | ea | 1,600.00 | 32,000 | | |
| 1378 | Pull boxes | 6 | ea | 900.00 | 5,400 | | |
| 1379 | Feeders: | | | | | | |
| 1380 | 600A CU feed | 30 | lf | 159.40 | 4,782 | | |
| 1381 | 500A CU feed | 30 | lf | 126.75 | 3,803 | | |
| 1382 | 400A CU feed | 110 | lf | 111.00 | 12,210 | | |
| 1383 | 300A CU feed | 45 | lf | 65.00 | 2,925 | | |
| 1384 | 250A CU feed | 60 | lf | 59.00 | 3,540 | | |
| 1385 | 225A CU feed | 880 | lf | 51.25 | 45,100 | | |
| 1386 | 175A CU feed | 110 | lf | 41.00 | 4,510 | | |
| 1387 | 150A CU feed | 40 | lf | 34.00 | 1,360 | | |
| 1388 | 125A CU feed | 200 | lf | 32.00 | 6,400 | | |
| 1389 | 100A CU feed | 2,000 | lf | 25.00 | 50,000 | | |
| 1390 | 70A CU feed | 30 | lf | 22.00 | 660 | | |
| 1391 | 50A CU feed | 30 | lf | 13.50 | 405 | | |
| 1392 | 360A MI cable | 60 | lf | 222.00 | 13,320 | | |
| 1393 | 310A MI cable | 650 | lf | 150.00 | 97,500 | | |
| 1394 | 300A MI cable | 420 | lf | 130.00 | 54,600 | | |
| 1395 | 3000A AL feed | 1,120 | lf | 656.00 | 734,720 | | |
| 1396 | 2000A AL feed | 60 | lf | 437.00 | 26,220 | | |
| 1397 | 1200A AL feed | 180 | lf | 282.25 | 50,805 | | |
| 1398 | 800A AL feed | 350 | lf | 186.60 | 65,310 | | |
| 1399 | 600A AL feed | 450 | lf | 135.50 | 60,975 | | |
| 1400 | 400A AL feed | 2,400 | lf | 94.35 | 226,440 | | |
| 1401 | 300A AL feed | 150 | lf | 55.25 | 8,288 | | |
| 1402 | 225A AL feed | 2,050 | lf | 43.60 | 89,380 | | |
| 1403 | Feeders discount | (1) | ls | 100,000.00 | (100,000) | | |
| 1404 | <u>Photovoltaic</u> | | | | | | |
| 1405 | Roof mount PV arrays | | | | | Future | |
| 1406 | 400A 277/480V panelboard | 2 | ea | 3,300.00 | 6,600 | | |
| 1407 | 225A 277/480V panelboard | 2 | ea | 2,700.00 | 5,400 | | |
| 1408 | 200A disconnect switch WP | 7 | ea | 2,550.00 | 17,850 | | |
| 1409 | Feeders: <i>feeder lengths allowed, drawings incomplete</i> | | | | | | |
| 1410 | 1200A AL feed | 1,300 | lf | 282.25 | 366,925 | | |
| 1411 | 400A AL feed | 700 | lf | 94.35 | 66,045 | | |
| 1412 | 255A AL feed | 200 | lf | 43.60 | 8,720 | | |
| 1413 | 175A AL feed | 700 | lf | 34.85 | 24,395 | | |
| 1414 | Rough-in with conduit and backboxes | 1 | ls | 15,000.00 | 15,000 | | |
| 1415 | <u>Equipment Wiring</u> | | | | | | |
| 1416 | <i>Note: riser, mech schedules, & depicted points do not match, scope incomplete</i> | | | | | | |
| 1417 | ACCU 30A feed, connection & 30A FSS | 3 | ea | 1,530.00 | 4,590 | | |
| 1418 | ACH 400A feed, connection, allow safety switch | 2 | ea | 22,800.00 | 45,600 | | |
| 1419 | ACHP 800A feed, connection, allow safety switch | 1 | ea | 48,700.00 | 48,700 | | |
| 1420 | ACHP 400A feed, connection, allow safety switch | 2 | ea | 24,000.00 | 48,000 | | |
| 1421 | AD feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1422 | AF feed and connection | 2 | ea | 2,500.00 | 5,000 | | |
| 1423 | Anerobic digester allow 30A feed & connection | 1 | ea | 1,790.00 | 1,790 | | |
| 1424 | BD feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1425 | BG feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1426 | Boiler 700A feed, connection, allow safety switch | 2 | ea | 26,000.00 | 52,000 | | |
| 1427 | 3HP Boiler pump 20A feed, connection, allow safety switch | 4 | ea | 1,200.00 | 4,800 | | |
| 1428 | BS feed and connection | 13 | ea | 1,500.00 | 19,500 | | |
| 1429 | CHW 30A feed, connection & 30A FSS | 3 | ea | 1,365.00 | 4,095 | | |
| 1430 | 20HP CHWP 30A feed and connection | 10 | ea | 2,400.00 | 24,000 | | |
| 1431 | Compactor allow 30A feed & connection | 1 | ea | 1,790.00 | 1,790 | | |
| 1432 | CP allow 30A feed & connection | 4 | ea | 1,300.00 | 5,200 | | |
| 1433 | CS feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1434 | CUH 30A feed, connection & 30A FSS | 1 | ea | 1,125.00 | 1,125 | | |
| 1435 | DF 30A feed, connection & MMS | 4 | ea | 1,675.00 | 6,700 | | |
| 1436 | DP feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1437 | Dust collector 200A feed, connection, allow 100A safety switch | 1 | ea | 3,600.00 | 3,600 | | |
| 1438 | EAC feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1439 | ECUH feed and connection | 5 | ea | 1,500.00 | 7,500 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|-----|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1440 | EF 20A feed, connection & combo MMS, switch with pilot light | 15 | ea | 1,200.00 | 18,000 | | |
| 1441 | Elevator controller 70A feed, connection & 100A FSS | 2 | ea | 4,490.00 | 8,980 | | |
| 1442 | Elevator fan feed, connection & NFSS, allow 30A | 1 | ea | 1,890.00 | 1,890 | | |
| 1443 | Elevator lit feed, connection & FSS, allow 30A | 1 | ea | 1,890.00 | 1,890 | | |
| 1444 | Elevator lit feed, connection & NFSS, allow 30A | 1 | ea | 1,250.00 | 1,250 | | |
| 1445 | ERU 100A feed, connection & 100A FSS | 1 | ea | 5,500.00 | 5,500 | | |
| 1446 | ERU 70A feed, connection & 100A FSS WP | 1 | ea | 4,000.00 | 4,000 | | |
| 1447 | ERU 45A feed, connection & 60A FSS | 1 | ea | 3,200.00 | 3,200 | | |
| 1448 | ERU 20A feed, connection & 30A FSS | 1 | ea | 1,500.00 | 1,500 | | |
| 1449 | EUH 30A feed, connection & 30SA FSS | 3 | ea | 1,225.00 | 3,675 | | |
| 1450 | EWB 30A feed, connection & MMS | 19 | ea | 850.00 | 16,150 | | |
| 1451 | F 20A feed & connection | 10 | ea | 1,010.00 | 10,100 | | |
| 1452 | FCB 20A feed & connection | 150 | ea | 600.00 | 90,000 | | |
| 1453 | FCU 20A feed, connection & MMS | 44 | ea | 450.00 | 19,800 | | |
| 1454 | Fire pump 225A feed (emergency power) | | | | See Site Work | | |
| 1455 | Fire pump 225A feed (normal power) | 60 | lf | 51.00 | 3,060 | | |
| 1456 | Fire pump connection | 1 | ea | 4,500.00 | 4,500 | | |
| 1457 | Food waste recycling system feed & connection, allow 30A | 1 | ea | 1,800.00 | 1,800 | | |
| 1458 | Power for future vapor mitigation fans | 18 | ea | 900.00 | 16,200 | | |
| 1459 | FPB 20A feed, connection & MMS | 32 | ea | 725.00 | 23,200 | | |
| 1460 | Heat tracing, allow | 1 | ls | 15,000.00 | 15,000 | | |
| 1461 | HP 40A feed & connection | 1 | ea | 1,065.00 | 1,065 | | |
| 1462 | HRCU feed, connection & safety switch, allow 60A | 61 | ea | 3,200.00 | 195,200 | | |
| 1463 | HRU 125A feed, connection & 200A FSS WP | 5 | ea | 7,580.00 | 37,900 | | |
| 1464 | HRU 100A feed, connection & 100A FSS WP | 3 | ea | 4,600.00 | 13,800 | | |
| 1465 | HRU 70A feed, connection & 100A FSS WP | 2 | ea | 4,000.00 | 8,000 | | |
| 1466 | HRU 60A feed, connection & 60A FSS WP | 1 | ea | 3,800.00 | 3,800 | | |
| 1467 | HRU 45A feed, connection & 60A FSS WP | 2 | ea | 3,200.00 | 6,400 | | |
| 1468 | HRU 40A feed, connection & 60A FSS WP | 1 | ea | 3,000.00 | 3,000 | | |
| 1469 | HRU 35A feed, connection & 60A FSS WP | 1 | ea | 2,500.00 | 2,500 | | |
| 1470 | HV 100A feed, connection & 100A FSS WP | 1 | ea | 7,585.00 | 7,585 | | |
| 1471 | 20HP HWP 30A feed, connection, allow safety switch | 6 | ea | 2,400.00 | 14,400 | | |
| 1472 | Jockey 20A feed, connection & 30A FSS | 1 | ea | 1,325.00 | 1,325 | | |
| 1473 | JT feed and connection | 1 | | 2,500.00 | 2,500 | | |
| 1474 | Kiln feed, connection & NFSS, allow 60A | 4 | ea | 1,740.00 | 6,960 | | |
| 1475 | Kiln vent feed, connection & NFSS, allow 30A | 2 | ea | 1,155.00 | 2,310 | | |
| 1476 | LA feed and connection | 2 | ea | 2,500.00 | 5,000 | | |
| 1477 | 30A MAU feed and connection | 1 | ea | 3,000.00 | 3,000 | | |
| 1478 | MC controller | 9 | ea | 1,500.00 | 13,500 | | |
| 1479 | ML feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1480 | PL feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1481 | Projection screen feed, connection & control station, allow 30A | 1 | ea | 2,200.00 | 2,200 | | |
| 1482 | PS feed and connection | 3 | ea | 2,500.00 | 7,500 | | |
| 1483 | RFCU feed and connection | 136 | ea | 250.00 | 34,000 | | |
| 1484 | RT feed and connection | 1 | ea | 2,500.00 | 2,500 | | |
| 1485 | TS feed and connection | 2 | ea | 2,500.00 | 5,000 | | |
| 1486 | UV 30A feed, connection & 30A FSS | 1 | ea | 1,120.00 | 1,120 | | |
| 1487 | VAV feed & connection | 37 | ea | 650.00 | 24,050 | | |
| 1488 | VRF feed & connection | 151 | ea | 650.00 | 98,150 | | |
| 1489 | VSD connection | 48 | ea | 650.00 | 31,200 | | |
| 1490 | Kitchen/Servery equipment feed and connections | | | | 0 | | |
| 1491 | 50A feed and connection | 1 | ea | 1,100.00 | 1,100 | | |
| 1492 | 40A feed and connection | 1 | ea | 900.00 | 900 | | |
| 1493 | 30A feed and connection | 4 | ea | 800.00 | 3,200 | | |
| 1494 | 20A feed and connection | 20 | ea | 750.00 | 15,000 | | |
| 1495 | Cooler CU 30A feed, connection & 30A FSS WP | 1 | ea | 1,500.00 | 1,500 | | |
| 1496 | Freezer CU 30A feed, connection & 30A FSS WP | 1 | ea | 1,500.00 | 1,500 | | |
| 1497 | Gymnasium: | | | | | | |
| 1498 | Power to scoreboard & control stations | 2 | loc | 3,500.00 | 7,000 | | |
| 1499 | MB feed & connection, allow 30A | 1 | ea | 1,550.00 | 1,550 | | |
| 1500 | BB feed & connection, allow 30A | 1 | ea | 1,500.00 | 1,500 | | |
| 1501 | Motorized bleacher feed, connection & FSS | 2 | ea | 1,800.00 | 3,600 | | |
| 1502 | Power special purpose receptacle 14 & control to motorized backstop | 7 | ea | 1,500.00 | 10,500 | | |
| 1503 | Conn ST shot timer | 12 | ea | 100.00 | 1,200 | | |
| 1504 | Conn BC | 1 | ea | 100.00 | 100 | | |
| 1505 | Conn SB scoreboard | 3 | ea | 100.00 | 300 | | |
| 1506 | Conn MC | 1 | ea | 100.00 | 100 | | |
| 1507 | SUBTOTAL | | | | | 7,785,127 | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

1508
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1570
1571
1572
1573
1574
1575

D5020 LIGHTING & POWER

Lighting

| | | | | |
|----------|-------|----|-----------|---------|
| Exit | 244 | ea | 344.00 | 83,936 |
| PC01-4 | 55 | ea | 480.00 | 26,400 |
| PC01-6 | 29 | ea | 720.00 | 20,880 |
| PC01-8 | 416 | ea | 960.00 | 399,360 |
| PC01A | 149 | ea | 960.00 | 143,040 |
| PC01B | 125 | ea | 960.00 | 120,000 |
| PC02-10 | 4 | ea | 1,500.00 | 6,000 |
| PC02-12 | 2 | ea | 1,800.00 | 3,600 |
| PC02-16 | 5 | ea | 2,400.00 | 12,000 |
| PC02-4 | 29 | ea | 600.00 | 17,400 |
| PC02-6 | 34 | ea | 900.00 | 30,600 |
| PC02-8 | 149 | ea | 1,200.00 | 178,800 |
| PC04 | 79 | ea | 179.00 | 14,141 |
| PC04-2 | 2 | ea | 158.00 | 316 |
| PC04A | 27 | ea | 196.00 | 5,292 |
| PC05 | 6 | ea | 2,600.00 | 15,600 |
| PC05RD | 17 | ea | 2,600.00 | 44,200 |
| PC06 | 8 | ea | 3,153.00 | 25,224 |
| PC07 | 30 | ea | 365.00 | 10,950 |
| PC08 | 36 | ea | 289.00 | 10,404 |
| PC10 | 1 | ea | 2,065.00 | 2,065 |
| PC10RD | 6 | ea | 2,065.00 | 12,390 |
| PC12 | 2 | ea | 1,536.00 | 3,072 |
| PC13D | 45 | ea | 842.00 | 37,890 |
| PC14 | 20 | ea | 622.00 | 12,440 |
| PC15 | 3 | ea | 8,165.00 | 24,495 |
| PC16-4 | 28 | ea | 564.00 | 15,792 |
| PC16-6 | 14 | ea | 846.00 | 11,844 |
| PC16-8 | 127 | ea | 1,128.00 | 143,256 |
| PC16-110 | 2 | ea | 15,510.00 | 31,020 |
| PC16A-04 | 17 | ea | 564.00 | 9,588 |
| PC16A-08 | 36 | ea | 1,128.00 | 40,608 |
| PC16B-08 | 18 | ea | 1,128.00 | 20,304 |
| PC-18RD | 2 | ea | 1,128.00 | 2,256 |
| PC19-4 | 9 | ea | 384.00 | 3,456 |
| PC19-4RD | 2 | ea | 384.00 | 768 |
| PC19-6 | 125 | ea | 576.00 | 72,000 |
| PC19-6RD | 16 | ea | 576.00 | 9,216 |
| PC19-8 | 76 | ea | 768.00 | 58,368 |
| PC19-8RD | 31 | ea | 768.00 | 23,808 |
| PC20-4 | 4 | ea | 620.00 | 2,480 |
| PC20-6 | 3 | ea | 930.00 | 2,790 |
| PC20-8 | 16 | ea | 1,240.00 | 19,840 |
| PC23-100 | 109 | lf | 130.00 | 14,170 |
| PC23 | 6 | ea | 900.00 | 5,400 |
| PC24-4 | 6 | ea | 524.00 | 3,144 |
| PC24-4RD | 4 | ea | 524.00 | 2,096 |
| PC24-8 | 17 | ea | 1,048.00 | 17,816 |
| PC24-8RD | 8 | ea | 1,048.00 | 8,384 |
| PC25 | 22 | ea | 438.00 | 9,636 |
| PC27 | 4 | ea | 2,400.00 | 9,600 |
| PC27RD | 1 | ea | 2,400.00 | 2,400 |
| PC29RD | 12 | ea | 2,400.00 | 28,800 |
| PC30 | 4 | ea | 600.00 | 2,400 |
| PC31RD | 7 | ea | 576.00 | 4,032 |
| RB03 | 1,139 | ea | 78.00 | 88,842 |
| RB04 | 8 | ea | 312.00 | 2,496 |
| RB06-48 | 1 | ea | 10,800.00 | 10,800 |
| RB07-8 | 14 | ea | 1,800.00 | 25,200 |
| RB08 | 1 | ea | 1,008.00 | 1,008 |
| RB08-12 | 2 | ea | 1,008.00 | 2,016 |
| RB08-20 | 3 | ea | 1,680.00 | 5,040 |
| RB08-24 | 4 | ea | 2,016.00 | 8,064 |
| RB09 | 16 | ea | 668.00 | 10,688 |
| RB09T | 17 | lf | 110.00 | 1,870 |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|------------------|----------------------|-----|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1576 | RB09-2 | 3 | ea | 200.00 | 600 | | |
| 1577 | RB11 | 25 | ea | 1,420.00 | 35,500 | | |
| 1578 | RB13-4 | 1 | ea | 620.00 | 620 | | |
| 1579 | RB13-6 | 3 | ea | 930.00 | 2,790 | | |
| 1580 | RB13-8 | 1 | ea | 1,240.00 | 1,240 | | |
| 1581 | RB16RD | 16 | ea | 554.00 | 8,864 | | |
| 1582 | RB16AT | 62 | ea | 554.00 | 34,348 | | |
| 1583 | RB16T | 300 | lf | 110.00 | 33,000 | | |
| 1584 | RB16T-4 | 17 | ea | 554.00 | 9,418 | | |
| 1585 | RC01 | 42 | ea | 277.00 | 11,634 | | |
| 1586 | RC02 | 36 | ea | 319.00 | 11,484 | | |
| 1587 | RC03 | 4 | ea | 319.00 | 1,276 | | |
| 1588 | RC04 | 2 | ea | 1,702.00 | 3,404 | | |
| 1589 | RC04-2 | 1 | ea | 850.00 | 850 | | |
| 1590 | RC04-4 | 10 | ea | 1,702.00 | 17,020 | | |
| 1591 | RC04-8 | 1 | ea | 1,702.00 | 1,702 | | |
| 1592 | RC05-2 | 4 | ea | 168.00 | 672 | | |
| 1593 | RC05-3 | 2 | ea | 252.00 | 504 | | |
| 1594 | RC05-4 | 32 | ea | 336.00 | 10,752 | | |
| 1595 | RC05-6 | 516 | ea | 504.00 | 260,064 | | |
| 1596 | RC05-8 | 15 | ea | 672.00 | 10,080 | | |
| 1597 | RC05A-3 | 2 | ea | 270.00 | 540 | | |
| 1598 | RC05A-4 | 1 | ea | 405.00 | 405 | | |
| 1599 | RC05A-6 | 31 | ea | 540.00 | 16,740 | | |
| 1600 | RC06-4 | 34 | ea | 360.00 | 12,240 | | |
| 1601 | RC06-6 | 42 | ea | 540.00 | 22,680 | | |
| 1602 | RC06-7 | 2 | ea | 630.00 | 1,260 | | |
| 1603 | RC06-8 | 36 | ea | 720.00 | 25,920 | | |
| 1604 | RC06-10 | 1 | ea | 900.00 | 900 | | |
| 1605 | RC06-24 | 1 | ea | 2,160.00 | 2,160 | | |
| 1606 | RC07-4 | 1 | ea | 336.00 | 336 | | |
| 1607 | RC07-5 | 4 | ea | 420.00 | 1,680 | | |
| 1608 | RC07-8 | 8 | ea | 672.00 | 5,376 | | |
| 1609 | RC09 | 35 | ea | 379.00 | 13,265 | | |
| 1610 | RC13 | 57 | ea | 470.00 | 26,790 | | |
| 1611 | RC13RD | 12 | ea | 470.00 | 5,640 | | |
| 1612 | RC14 | 162 | ea | 191.00 | 30,942 | | |
| 1613 | RC15 | 28 | ea | 542.00 | 15,176 | | |
| 1614 | RC16 | 19 | ea | 319.00 | 6,061 | | |
| 1615 | RC17 | 139 | ea | 470.00 | 65,330 | | |
| 1616 | RC17T | 18 | ea | 470.00 | 8,460 | | |
| 1617 | RC17RD | 18 | ea | 470.00 | 8,460 | | |
| 1618 | RC19 | 15 | ea | 470.00 | 7,050 | | |
| 1619 | RC22 | 40 | ea | 220.00 | 8,800 | | |
| 1620 | RC23 | 21 | ea | 224.00 | 4,704 | | |
| 1621 | RC24 | 195 | ea | 224.00 | 43,680 | | |
| 1622 | RC27TRD | 60 | ea | 488.00 | 29,280 | | |
| 1623 | RC28 | 20 | ea | 266.00 | 5,320 | | |
| 1624 | RC29 | 4 | ea | 160.00 | 640 | | |
| 1625 | RC31 | 16 | ea | 632.00 | 10,112 | | |
| 1626 | RC32 | 112 | ea | 210.00 | 23,520 | | |
| 1627 | RC34 | 124 | ea | 214.00 | 26,536 | | |
| 1628 | RC42 | 13 | ea | 258.00 | 3,354 | | |
| 1629 | RC44 | 33 | ea | 416.00 | 13,728 | | |
| 1630 | RC52 | 23 | ea | 200.00 | 4,600 | | |
| 1631 | RC54 | 152 | ea | 223.00 | 33,896 | | |
| 1632 | RC56 | 43 | ea | 223.00 | 9,589 | | |
| 1633 | RG02 | 2 | ea | 500.00 | 1,000 | | |
| 1634 | RW01 connection only | 46 | ea | 100.00 | 4,600 | | |
| 1635 | RW02 | 27 | ea | 579.00 | 15,633 | | |
| 1636 | SC01?? | 16 | ea | 413.00 | 6,608 | | |
| 1637 | SC03?? | 9 | ea | 413.00 | 3,717 | | |
| 1638 | SC04 | 19 | ea | 179.00 | 3,401 | | |
| 1639 | SC08?? | 18 | ea | 413.00 | 7,434 | | |
| 1640 | SC14?? | 2 | ea | 500.00 | 1,000 | | |
| 1641 | SC18 | 47 | ea | 356.00 | 16,732 | | |
| 1642 | SC18P | 13 | ea | 356.00 | 4,628 | | |
| 1643 | SW02 | 4 | ea | 1,820.00 | 7,280 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1644 | SW03 | 19 | ea | 524.00 | 9,956 | | |
| 1645 | SW04 | 132 | ea | 216.00 | 28,512 | | |
| 1646 | SW04 power supply, allow | 2 | ea | 1,000.00 | 2,000 | | |
| 1647 | SW05-4 | 2 | ea | 1,480.00 | 2,960 | | |
| 1648 | SW05-6 | 3 | ea | 2,220.00 | 6,660 | | |
| 1649 | SW05-8 | 15 | ea | 2,960.00 | 44,400 | | |
| 1650 | SW06 | 11 | ea | 2,400.00 | 26,400 | | |
| 1651 | SW06-4 | 2 | ea | 2,400.00 | 4,800 | | |
| 1652 | SW06-6 | 1 | ea | 2,400.00 | 2,400 | | |
| 1653 | SW07 | 3 | ea | 412.00 | 1,236 | | |
| 1654 | SW08-03 | 1 | ea | 375.00 | 375 | | |
| 1655 | SW08-04 | 24 | ea | 500.00 | 12,000 | | |
| 1656 | SW08-06 | 8 | ea | 750.00 | 6,000 | | |
| 1657 | SW08-08 | 42 | ea | 1,000.00 | 42,000 | | |
| 1658 | SW09-4 | 39 | ea | 509.00 | 19,851 | | |
| 1659 | SW10 | 5 | ea | 848.00 | 4,240 | | |
| 1660 | SW11 | 10 | ea | 224.00 | 2,240 | | |
| 1661 | TE-01 68 LF | 3 | ea | 1,700.00 | 5,100 | | |
| 1662 | TE-01 30 LF | 5 | ea | 750.00 | 3,750 | | |
| 1663 | TG-01 head | 36 | ea | 383.00 | 13,788 | | |
| 1664 | TM01 | 12 | ea | 632.00 | 7,584 | | |
| 1665 | TM03 | 11 | ea | 632.00 | 6,952 | | |
| 1666 | TR01, head | 36 | ea | 150.00 | 5,400 | | |
| 1667 | TR01 (Track) | 249 | lf | 50.00 | 12,450 | | |
| 1668 | TR02 (Track) | 8 | ea | 50.00 | 400 | | |
| 1669 | TR03 (Track) | 51 | ea | 50.00 | 2,550 | | |
| 1670 | UC01 | 492 | ea | 220.00 | 108,240 | | |
| 1671 | UC01-4 | 17 | ea | 220.00 | 3,740 | | |
| 1672 | Discount on lighting fixture quote | (1) | ls | 170,040.00 | (170,040) | | |
| 1673 | <u>Lighting control system</u> | | | | | | |
| 1674 | Lighting control panel | 42 | ea | 2,500.00 | 105,000 | | |
| 1675 | Lighting control system | 408,500 | sf | 0.35 | 142,975 | | |
| 1676 | DS wireless photocell (daylight sensor) | 233 | ea | 100.00 | 23,300 | | |
| 1677 | Four way switch | 1 | ea | 34.00 | 34 | | |
| 1678 | LD 0-10v dimmer w control wiring to fixture | 44 | ea | 120.00 | 5,280 | | |
| 1679 | LV wireless wall switch w On-Off Raise-Lower push buttons | 719 | ea | 28.00 | 20,132 | | |
| 1680 | LVD | 1 | ea | 130.00 | 130 | | |
| 1681 | LVO Wireless low voltage over ride switch | 85 | ea | 65.00 | 5,525 | | |
| 1682 | NB wireless network bridge | 222 | ea | 75.00 | 16,650 | | |
| 1683 | OS/OS1/VS Occupancy/vacancy sensor | 1,108 | ea | 180.00 | 199,440 | | |
| 1684 | OSL | 9 | ea | 180.00 | 1,620 | | |
| 1685 | PC | 3 | ea | 210.00 | 630 | | |
| 1686 | PS | 2 | ea | 210.00 | 420 | | |
| 1687 | R emergency bypass relay | 105 | ea | 150.00 | 15,750 | | |
| 1688 | RD | 81 | ea | 125.00 | 10,125 | | |
| 1689 | Single pole switch | 55 | ea | 30.00 | 1,650 | | |
| 1690 | Single pole switch WP | 2 | ea | 40.00 | 80 | | |
| 1691 | \$LV2 | 4 | ea | 65.00 | 260 | | |
| 1692 | \$LV3 | 5 | ea | 75.00 | 375 | | |
| 1693 | LV2 | 21 | ea | 100.00 | 2,100 | | |
| 1694 | LV3 | 9 | ea | 110.00 | 990 | | |
| 1695 | LV4 | 33 | ea | 120.00 | 3,960 | | |
| 1696 | Vacancy sensor | 517 | ea | 100.00 | 51,700 | | |
| 1697 | | | | | | | |
| 1698 | <u>Lighting circuitry</u> | | | | | | |
| 1699 | Device plate | 900 | ea | 5.25 | 4,725 | | |
| 1700 | Device box | 8,250 | ea | 29.40 | 242,550 | | |
| 1701 | 3/4" conduit | 32,500 | lf | 6.00 | 195,000 | | |
| 1702 | #12 THHN | 195,000 | lf | 0.85 | 165,750 | | |
| 1703 | 12-2 MC cable | 73,000 | lf | 4.00 | 292,000 | | |
| 1704 | 12-3 MC cable | 24,300 | lf | 4.75 | 115,425 | | |
| 1705 | Cat cabling | 75,000 | lf | 1.10 | 82,500 | | |
| 1706 | <u>Branch devices</u> | | | | | | |
| 1707 | Duplex receptacle | 2,130 | ea | 26.00 | 55,380 | | |
| 1708 | Duplex receptacle, AV drawings | 72 | ea | 26.00 | 1,872 | | |
| 1709 | Duplex receptacle in floor box | 11 | ea | 26.00 | 286 | | |
| 1710 | Double duplex receptacle | 518 | ea | 50.00 | 25,900 | | |
| 1711 | Double duplex receptacle, AV drawings | 6 | ea | 50.00 | 300 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1712 | Double duplex receptacle, in floor box | 44 | ea | 50.00 | 2,200 | | |
| 1713 | GFI duplex receptacle | 925 | ea | 42.00 | 38,850 | | |
| 1714 | GFI double duplex receptacle | 8 | ea | 80.00 | 640 | | |
| 1715 | Special 13 20A L5-20R twist lock | 12 | ea | 65.00 | 780 | | |
| 1716 | Special 14 30A35-30R twist lock | 1 | ea | 75.00 | 75 | | |
| 1717 | Special 15 20A L6-20R twist lock | 3 | ea | 65.00 | 195 | | |
| 1718 | Special 16 30A L6-30R twist lock | 25 | ea | 75.00 | 1,875 | | |
| 1719 | Special 17 20A L15-20R twist lock | 3 | ea | 65.00 | 195 | | |
| 1720 | Special 4 GFI | 5 | ea | 85.00 | 425 | | |
| 1721 | Special 3 50A 5-50R | 4 | ea | 85.00 | 340 | | |
| 1722 | Special 7 10-30R | 2 | ea | 75.00 | 150 | | |
| 1723 | Special 8 10/50R | 18 | ea | 85.00 | 1,530 | | |
| 1724 | Special purpose receptacle, AV drawings | 7 | ea | 65.00 | 455 | | |
| 1725 | Connection to aisle light at seat arm | 59 | ea | 100.00 | 5,900 | | |
| 1726 | Connection to auditorium equip | 16 | ea | 100.00 | 1,600 | | |
| 1727 | Connection to AVR | 5 | ea | 100.00 | 500 | | |
| 1728 | Connection to black box equip | 4 | ea | 100.00 | 400 | | |
| 1729 | Connection to card reader | 26 | ea | 100.00 | 2,600 | | |
| 1730 | Connection to control panel | 9 | ea | 100.00 | 900 | | |
| 1731 | Connection to door holder | 28 | ea | 100.00 | 2,800 | | |
| 1732 | Connection to door operator | 8 | ea | 100.00 | 800 | | |
| 1733 | Connection to door operator motor | 16 | ea | 100.00 | 1,600 | | |
| 1734 | Connection to ESV | 1 | ea | 100.00 | 100 | | |
| 1735 | Connection to ESV WP | 2 | ea | 120.00 | 240 | | |
| 1736 | Connection to fire alarm panel | 26 | ea | 100.00 | 2,600 | | |
| 1737 | Connection to hand dryer | 23 | ea | 85.00 | 1,955 | | |
| 1738 | Connection to int | 2 | ea | 100.00 | 200 | | |
| 1739 | Connection to LL | 4 | ea | 100.00 | 400 | | |
| 1740 | Connection to lula lift | 2 | ea | 150.00 | 300 | | |
| 1741 | Connection to MD | 1 | ea | 100.00 | 100 | | |
| 1742 | Connection to MR | 1 | ea | 100.00 | 100 | | |
| 1743 | Connection to MS | 33 | ea | 120.00 | 3,960 | | |
| 1744 | Connection to MSC | 4 | ea | 150.00 | 600 | | |
| 1745 | Connection to PWR | 1 | ea | 100.00 | 100 | | |
| 1746 | Connection to water cooler bottle filler | 15 | ea | 250.00 | 3,750 | | |
| 1747 | Connection to security LV power supply | 17 | ea | 85.00 | 1,445 | | |
| 1748 | Connection to unidentified equipment | 15 | ea | 550.00 | 8,250 | | |
| 1749 | Cord reel with duplex | 72 | ea | 600.00 | 43,200 | | |
| 1750 | Cord reel with GFI | 18 | ea | 525.00 | 9,450 | | |
| 1751 | MPS | 4 | ea | 150.00 | 600 | | |
| 1752 | Rough-in for future catenary lighting | 12 | ea | 100.00 | 1,200 | | |
| 1753 | FB AV drawings, 12 gang | 4 | ea | 1,200.00 | 4,800 | | |
| 1754 | Floor box/Poke thru | 55 | ea | 500.00 | 27,500 | | |
| 1755 | <u>Branch circuitry</u> | | | | | | |
| 1756 | Device plate WP | 76 | ea | 20.00 | 1,520 | | |
| 1757 | Device plate | 3,600 | ea | 5.25 | 18,900 | | |
| 1758 | Device box | 4,000 | ea | 29.40 | 117,600 | | |
| 1759 | 3/4" conduit | 18,000 | lf | 6.00 | 108,000 | | |
| 1760 | #12 THHN | 110,000 | lf | 0.85 | 93,500 | | |
| 1761 | #10 THHN | 4,000 | lf | 1.00 | 4,000 | | |
| 1762 | #8 THHN | 2,000 | lf | 1.40 | 2,800 | | |
| 1763 | 12-2 MC cable | 40,000 | lf | 4.00 | 160,000 | | |
| 1764 | 12-3 MC cable | 13,500 | lf | 4.70 | 63,450 | | |
| 1765 | 1" EMT in floor, allow to FB/PT | 700 | lf | 7.00 | 4,900 | | |
| 1766 | SUBTOTAL | | | | | 5,770,904 | |
| 1767 | | | | | | | |
| 1768 | D5030 COMMUNICATION & SECURITY SYSTEMS | | | | | | |
| 1769 | <u>Telecommunications - Structured Cabling</u> | | | | | | |
| 1770 | MDF fit-out closet | 1 | loc | 8,000.00 | 8,000 | | |
| 1771 | IDF fit-out closet | 12 | loc | 4,000.00 | 48,000 | | |
| 1772 | Rack | 15 | ea | 850.00 | 12,750 | | |
| 1773 | Network Server | | | | | By owner | |
| 1774 | 1-port device (phone) | 179 | ea | 15.00 | 2,685 | | |
| 1775 | 1-port device | 70 | ea | 15.00 | 1,050 | | |
| 1776 | 2-port device | 560 | ea | 30.00 | 16,800 | | |
| 1777 | 4-port device | 24 | ea | 60.00 | 1,440 | | |
| 1778 | 6-port device | 1 | ea | 90.00 | 90 | | |
| 1779 | 8-port device | 8 | ea | 120.00 | 960 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|---------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1780 | 10-port device | 2 | ea | 150.00 | 300 | | |
| 1781 | Data CAM | 131 | ea | 22.00 | 2,882 | | |
| 1782 | Data CAM WP | 10 | ea | 32.00 | 320 | | |
| 1783 | CAM | 4 | ea | 22.00 | 88 | | |
| 1784 | TV device | 153 | ea | 15.00 | 2,295 | | |
| 1785 | WAP device | 323 | ea | 350.00 | 113,050 | | |
| 1786 | WAP device WP | 15 | ea | 400.00 | 6,000 | | |
| 1787 | Cat. 6a/5e cable | 350,000 | lf | 1.10 | 385,000 | | |
| 1788 | Backbone cabling: 25pr cat CU & 25 strand MM fiber | 2,000 | lf | 15.00 | 30,000 | | |
| 1789 | Rough-in | | | | | | |
| 1790 | MDF fit-out rough-in | 1 | loc | 5,000.00 | 5,000 | | |
| 1791 | IDF fit-out rough-in | 12 | loc | 2,500.00 | 30,000 | | |
| 1792 | Device box with 1-1/4" conduit stub to accessible ceiling | 510 | ea | 110.00 | 56,100 | | |
| 1793 | 2 gang device box with 1-1/4" conduit stub to accessible ceiling | 748 | ea | 150.00 | 112,200 | | |
| 1794 | 12' cable tray (closets) | 220 | lf | 60.00 | 13,200 | | |
| 1795 | 4" sleeve | 60 | ea | 250.00 | 15,000 | | |
| 1796 | 4" EMT | 6,000 | lf | 31.70 | 190,200 | | |
| 1797 | Closet backboard | 13 | ea | 500.00 | 6,500 | | |
| 1798 | System Grounding | 1 | ls | 5,000.00 | 5,000 | | |
| 1799 | <u>Fire Alarm</u> | | | | | | |
| 1800 | Fire alarm control panel | 2 | ea | 40,000.00 | 80,000 | | |
| 1801 | Fire alarm terminal cabinet | 15 | ea | 1,500.00 | 22,500 | | |
| 1802 | FSCP | 1 | ea | 1,600.00 | 1,600 | | |
| 1803 | Remote annunciator | 2 | ea | 1,600.00 | 3,200 | | |
| 1804 | Knox box | 4 | ea | 330.00 | 1,320 | | |
| 1805 | Radio Master box | 1 | ea | 6,500.00 | 6,500 | | |
| 1806 | Beacon | 4 | ea | 281.00 | 1,124 | | |
| 1807 | Manual pull station | 94 | ea | 107.00 | 10,058 | | |
| 1808 | Manual pull station WP | 2 | ea | 117.00 | 234 | | |
| 1809 | Smoke detector | 392 | ea | 148.00 | 58,016 | | |
| 1810 | Heat detector, allow | 2 | ea | 148.00 | 296 | | |
| 1811 | CO detector | 45 | ea | 148.00 | 6,660 | | |
| 1812 | Duct smoke detector with remote test switch, allow | 24 | ea | 547.00 | 13,128 | | |
| 1813 | Audio/visual device | 731 | ea | 151.00 | 110,381 | | |
| 1814 | Audio/visual device WP | 4 | ea | 161.00 | 644 | | |
| 1815 | Combination AV/CO device | 2 | ea | 200.00 | 400 | | |
| 1816 | Visual device | 197 | ea | 130.00 | 25,610 | | |
| 1817 | Audio device | 8 | ea | 130.00 | 1,040 | | |
| 1818 | Remote alarm indicator | 53 | ea | 203.00 | 10,759 | | |
| 1819 | Magnetic door holder | 91 | ea | 197.00 | NIC | | |
| 1820 | Lula connection | 1 | ea | 350.00 | 350 | | |
| 1821 | AR | 1 | ea | 500.00 | 500 | | |
| 1822 | MDC | 1 | ea | 500.00 | 500 | | |
| 1823 | BP | 9 | ea | 500.00 | 4,500 | | |
| 1824 | Connection to elevator status panel | 1 | ea | 147.00 | 147 | | |
| 1825 | Connection to fire suppression system | 1 | ea | 147.00 | 147 | | |
| 1826 | Kitchen connection | 2 | ea | 147.00 | 294 | | |
| 1827 | Elevator recall connection | 4 | ea | 147.00 | 588 | | |
| 1828 | Tamper/flow switch | 82 | ea | 235.00 | 19,270 | | |
| 1829 | Control/monitor module | 100 | ea | 235.00 | 23,500 | | |
| 1830 | Device box WP | 6 | ea | 40.00 | 240 | | |
| 1831 | Device box | 1,880 | ea | 29.40 | 55,272 | | |
| 1832 | 3/4" conduit | 19,740 | lf | 6.00 | 118,440 | | |
| 1833 | FA cable | 59,220 | lf | 1.00 | 59,220 | | |
| 1834 | FAMC cable | 46,060 | lf | 5.00 | 230,300 | | |
| 1835 | Testing & programming | 1 | ls | 15,700.00 | 15,700 | | |
| 1836 | <u>Bi-Directional Amplifier System (DAS)</u> | | | | | | |
| 1837 | Bi-Directional Amplifier System | 1 | ls | 175,000.00 | 175,000 | | |
| 1838 | BDA amplifier antenna | 1 | ea | | Included | | |
| 1839 | DAS device | 80 | ea | | Included | | |
| 1840 | DAS communication port | 80 | ea | 22.00 | 1,760 | | |
| 1841 | Communication cabling | 15,000 | lf | 1.20 | 18,000 | | |
| 1842 | 2 gang device box with 1-1/4" conduit stub to accessible ceiling | 80 | ea | 200.00 | 16,000 | | |
| 1843 | <u>Two-Way Communication</u> | | | | | | |
| 1844 | Two-Way Communication | 1 | ls | 25,000.00 | 25,000 | | |
| 1845 | <u>Public Address/Clock System</u> | | | | | | |
| 1846 | Head end | 1 | ls | 20,000.00 | 20,000 | | |
| 1847 | Phone/Handset, allow 1/telephone port | 179 | ea | 250.00 | 44,750 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|---------|------|--------------|----------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1848 | Clock | 94 | ea | 150.00 | 14,100 | | |
| 1849 | Clock, Gym | 6 | ea | 250.00 | 1,500 | | |
| 1850 | Clock WP | 1 | ea | 200.00 | 200 | | |
| 1851 | Exterior building mounted clock | 1 | ls | 50,000.00 | 50,000 | | |
| 1852 | Speakers, volume control and cabling , not depicted at this scope level | 408,600 | sf | 0.30 | 122,580 | | |
| 1853 | Speaker, ceiling mount | 850 | ea | 120.00 | 102,000 | | |
| 1854 | Speaker, wall mount | 82 | ea | 120.00 | 9,840 | | |
| 1855 | Speaker, wall mount WP | 11 | ea | 200.00 | 2,200 | | |
| 1856 | Rough-in | | | | | | |
| 1857 | Ceiling speaker back box | 850 | ea | 40.00 | 34,000 | | |
| 1858 | Device box with conduit stub | 93 | ea | 85.00 | 7,905 | | |
| 1859 | Speaker cabling | 48,000 | lf | 1.20 | 57,600 | | |
| 1860 | <i>No Clock System Riser - estimator has assumed clocks are battery powered</i> | | | | | | |
| 1861 | <u>Classroom Speech Amplification</u> | | | | | | |
| 1862 | Teach Logic IRM-5650/CS4 system equipment | 130 | ea | 1,600.00 | 208,000 | | |
| 1863 | IMA-520 Maxim III Amplifier | | | | Included | | |
| 1864 | IRH-35 handheld microphone transmitter | | | | Included | | |
| 1865 | IRT-60 Sapphire pendant/neck worn classroom microphone transmitter | | | | Included | | |
| 1866 | BRC-55 Drop-in charger | | | | Included | | |
| 1867 | SP-628 ceiling speaker with speaker wire x4 | | | | Included | | |
| 1868 | SA - not on Legend, assumed this is a Speech Amplification system amplifier | 130 | ea | 125.00 | 16,250 | | |
| 1869 | Rough-in | | | | | | |
| 1870 | Wall box with conduit stub & device installation | 130 | ea | 85.00 | 11,050 | | |
| 1871 | Speakers, assumes no back box, plenum cable, installation of speaker & cabling only | 520 | ea | 75.00 | 39,000 | | |
| 1872 | Testing & set up | 130 | ea | 750.00 | 97,500 | | |
| 1873 | <u>Auditorium</u> | | | | | | |
| 1874 | Audio visual equipment, installation & LV cabling | 1 | ls | 150,000.00 | 150,000 | | |
| 1875 | Production intercom system | | | | Included above | | |
| 1876 | Assistive Listening system | | | | Included above | | |
| 1877 | Audio visual rough-in: | | | | | | |
| 1878 | 12X12X4" box | 5 | ea | 85.00 | 425 | | |
| 1879 | 12X12X6" box | 4 | ea | 100.00 | 400 | | |
| 1880 | 1 gang back box | 15 | ea | 29.40 | 441 | | |
| 1881 | 2 gang back box | 6 | ea | 29.40 | 176 | | |
| 1882 | 3 gang back box | 4 | ea | 49.00 | 196 | | |
| 1883 | 4 gang back box | 8 | ea | 49.00 | 392 | | |
| 1884 | 4x4x4" box | 4 | ea | 28.00 | 112 | | |
| 1885 | 8x8x4" box | 11 | ea | 49.00 | 539 | | |
| 1886 | Box as required | 1 | ea | 250.00 | 250 | | |
| 1887 | Speaker, comes with back box | 16 | ea | 65.00 | Included | | |
| 1888 | 3/4" EMT | 5,100 | lf | 6.00 | 30,600 | | |
| 1889 | 1" EMT | 3,000 | lf | 7.25 | 21,750 | | |
| 1890 | 1-1/4" EMT | 1,700 | lf | 9.50 | 16,150 | | |
| 1891 | 1-1/2" EMT | 550 | lf | 11.00 | 6,050 | | |
| 1892 | 2" EMT | 200 | lf | 14.50 | 2,900 | | |
| 1893 | Stage Lighting: | | | | | | |
| 1894 | Rigging system equipment & installation | 1 | ls | | See equipment | | |
| 1895 | Power to rigging equipment, Hoist | | | | NIC | | |
| 1896 | Power to rigging control station | | | | NIC | | |
| 1897 | Stage dimming system, allowance per Barbizon 8/5/20 | 1 | ls | 582,898.50 | 582,899 | | |
| 1898 | Stage fixture and accessory package, allowance per Barbizon 8/5/20 | | | | Incl. above | | |
| 1899 | Company switch, 200A | 1 | ea | 2,500.00 | Incl. above | | |
| 1900 | Feed to company switch | 200 | lf | 45.00 | 9,000 | | |
| 1901 | Dimmer rack | 3 | ea | | Incl. above | | |
| 1902 | Rack installation | 3 | ea | 1,500.00 | 4,500 | | |
| 1903 | 225A feed to each rack, allow to main electric room (not depicted on riser yet) | 600 | lf | 51.25 | 30,750 | | |
| 1904 | Lighting control rack | 1 | ls | | Incl. above | | |
| 1905 | Rack installation & power | 1 | ea | 1,000.00 | 1,000 | | |
| 1906 | ELTS | 1 | ea | | Incl. above | | |
| 1907 | ELTS installation | 1 | ea | 1,000.00 | 1,000 | | |
| 1908 | Feed to ELTS, allow 200A | 200 | lf | 45.00 | 9,000 | | |
| 1909 | Control: | | | | | | |
| 1910 | CC1 | 1 | ea | | Incl. above | | |
| 1911 | CC2 | 1 | ea | | Incl. above | | |
| 1912 | EP | 2 | ea | | Incl. above | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|--------|------|--------------|---------------------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1913 | FP | 1 | ea | | Incl. above | | |
| 1914 | TP | 1 | ea | | Incl. above | | |
| 1915 | WL1 | 5 | ea | | Incl. above | | |
| 1916 | WL2 | 1 | ea | | Incl. above | | |
| 1917 | WBB | 1 | ea | | Incl. above | | |
| 1918 | WBC | 1 | ea | | Incl. above | | |
| 1919 | 1 gang back box | 13 | ea | 29.40 | 382 | | |
| 1920 | 5 gang back box | 1 | ea | 68.00 | 68 | | |
| 1921 | Floor box | 1 | ea | | Incl. above | | |
| 1922 | Box per manufacturer | 1 | ea | | Incl. above | | |
| 1923 | 3/4" EMT | 8,000 | lf | 6.00 | 48,000 | | |
| 1924 | Belden cable | 12,000 | lf | 1.10 | 13,200 | | |
| 1925 | #14 THHN | 1,500 | lf | 0.80 | 1,200 | | |
| 1926 | #16 THHN | 3,000 | lf | 0.70 | 2,100 | | |
| 1927 | Circuitry: | | | | | | |
| 1928 | BP1D | 6 | ea | | Incl. above | | |
| 1929 | BP1DE | 8 | ea | | Incl. above | | |
| 1930 | BP1E | 8 | ea | | Incl. above | | |
| 1931 | BP2DE | 11 | ea | | Incl. above | | |
| 1932 | BP2E | 9 | ea | | Incl. above | | |
| 1933 | BR1D | 2 | ea | | Incl. above | | |
| 1934 | BR1DE | 4 | ea | | Incl. above | | |
| 1935 | BR1E | 5 | ea | | Incl. above | | |
| 1936 | BR1F | 1 | ea | | Incl. above | | |
| 1937 | BR2E | 2 | ea | | Incl. above | | |
| 1938 | BR2DE | 4 | ea | | Incl. above | | |
| 1939 | PL3E | 1 | | | Incl. above | | |
| 1940 | SP5DE | 4 | ea | | Incl. above | | |
| 1941 | Circuit box installation | 22 | ea | 150.00 | 3,300 | | |
| 1942 | Strip | 14 | ea | | Incl. above | | |
| 1943 | Strip installation | 14 | ea | 300.00 | 4,200 | | |
| 1944 | Custom back box | 9 | ea | | Incl. above | | |
| 1945 | 3 gang back box | 13 | ea | 49.00 | 637 | | |
| 1946 | 3/4" EMT | 6,000 | lf | 6.00 | 36,000 | | |
| 1947 | 1" EMT | 500 | lf | 7.25 | 3,625 | | |
| 1948 | #10 THHN | 30,000 | lf | 1.00 | 30,000 | | |
| 1949 | Terminations | 406 | ea | 15.00 | 6,090 | | |
| 1950 | Testing & system start-up | | | | Incl. above | | |
| 1951 | Initial light plot, installation & focus | | | | Incl. above | | |
| 1952 | <u>Blackbox Theater/Performing Arts</u> | | | | | | |
| 1953 | Audio visual equipment, installation & LV cabling, allow | 1 | ls | 45,000.00 | 45,000 | | |
| 1954 | Audio visual rough-in: | | | | | | |
| 1955 | 12x12x6" box | 2 | ea | 100.00 | 200 | | |
| 1956 | 2 gang back box | 5 | ea | 29.40 | 147 | | |
| 1957 | 4 gang back box | 8 | ea | 58.00 | 464 | | |
| 1958 | 8x8x4" box | 19 | ea | 49.00 | 931 | | |
| 1959 | Speaker, comes with back box | 2 | ea | 65.00 | Included | | |
| 1960 | 3/4" EMT | 2,500 | lf | 6.00 | 15,000 | | |
| 1961 | 1" EMT | 3,000 | lf | 7.25 | 21,750 | | |
| 1962 | 1-1/4" EMT | 400 | lf | 9.50 | 3,800 | | |
| 1963 | 1-1/2" EMT | 500 | lf | 11.00 | 5,500 | | |
| 1964 | Stage Lighting: | | | | | | |
| 1965 | Rigging system equipment & installation, allowance per Barbizon | 1 | ls | | See equipment | | |
| 1966 | Stage dimming system, allowance per Barbizon 8/5/20 | 1 | ls | | Incl. above in Auditorium | | |
| 1967 | Stage fixture and accessory package 8/5/20 | 1 | ls | | Incl. above in Auditorium | | |
| 1968 | ELTS | 1 | ea | | Incl. above | | |
| 1969 | Feed to ELTS, allow 200A | 200 | lf | 45.00 | 9,000 | | |
| 1970 | Control: | | | | | | |
| 1971 | CC3 | 2 | ea | | Incl. above | | |
| 1972 | FP | 1 | ea | | Incl. above | | |
| 1973 | PP | 2 | ea | | Incl. above | | |
| 1974 | 1 gang back box | 2 | ea | 29.40 | 59 | | |
| 1975 | 5 gang back box | 2 | ea | 68.00 | 136 | | |
| 1976 | Box per manufacturer | 1 | ea | | Incl. above | | |
| 1977 | 3/4" EMT | 7,500 | lf | 6.00 | 45,000 | | |
| 1978 | Belden cable | 12,000 | lf | 1.10 | 13,200 | | |
| 1979 | #14 THHN | 300 | lf | 0.80 | 240 | | |
| 1980 | #16 THHN | 600 | lf | 0.70 | 420 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|--------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 1981 | Circuitry: | | | | | | |
| 1982 | BP1D | 3 | ea | | | Incl. above | |
| 1983 | BP1E | 7 | ea | | | Incl. above | |
| 1984 | BP2DE | 6 | ea | | | Incl. above | |
| 1985 | BP2E | 9 | ea | | | Incl. above | |
| 1986 | BR1DE | 5 | ea | | | Incl. above | |
| 1987 | BR1E | 3 | ea | | | Incl. above | |
| 1988 | Circuit box installation | 18 | ea | 150.00 | 2,700 | | |
| 1989 | Strip | 15 | ea | | | Incl. above | |
| 1990 | Strip installation | 15 | ea | 300.00 | 4,500 | | |
| 1991 | Custom back box | 10 | ea | | | Incl. above | |
| 1992 | 3 gang back box | 8 | ea | 49.00 | 392 | | |
| 1993 | 3/4" EMT | 7,200 | lf | 6.00 | 43,200 | | |
| 1994 | #10 THHN | 28,000 | lf | 1.00 | 28,000 | | |
| 1995 | Terminations | 264 | ea | 15.00 | 3,960 | | |
| 1996 | Testing & system start-up | | | | | Incl. above | |
| 1997 | Initial light plot, installation & focus | | | | | Incl. above | |
| 1998 | <u>Audio Visual Systems</u> | | | | | | |
| 1999 | Chorus room, carrying previous allowance | 1 | ls | 10,800.00 | 10,800 | | |
| 2000 | Band room, carrying previous allowance | 1 | ls | 10,800.00 | 10,800 | | |
| 2001 | Production Lab, carrying previous allowance | 1 | ls | 27,000.00 | 27,000 | | |
| 2002 | Gymnasium sound system, carrying previous allowance | 1 | ls | 15,000.00 | 15,000 | | |
| 2003 | Cafeteria sound system, carrying previous allowance | 1 | ls | 15,000.00 | 15,000 | | |
| 2004 | Gymnasium RI: | | | | | | |
| 2005 | 4" square box | 31 | ea | 29.40 | 911 | | |
| 2006 | 4" deep square box | 6 | ea | 29.40 | 176 | | |
| 2007 | 6x6x4" pull box | 6 | ea | 39.00 | 234 | | |
| 2008 | 3/4" EMT | 700 | lf | 6.00 | 4,200 | | |
| 2009 | 1" EMT | 800 | lf | 7.25 | 5,800 | | |
| 2010 | 1-1/4" EMT | 300 | lf | 9.50 | 2,850 | | |
| 2011 | 1-1/2" EMT | 100 | lf | 11.00 | 1,100 | | |
| 2012 | 2" EMT | 200 | lf | 14.50 | 2,900 | | |
| 2013 | 2-1/2" EMT | 100 | lf | 16.50 | 1,650 | | |
| 2014 | General building AV RI: | | | | | | |
| 2015 | 3/4" EMT | 500 | lf | 6.00 | 3,000 | | |
| 2016 | 1" EMT | 100 | lf | 7.25 | 725 | | |
| 2017 | 1-1/2" EMT | 300 | lf | 11.00 | 3,300 | | |
| 2018 | Conduit to AV devices not yet covered in AV risers: allow 1-1/4" conduit per AVO.o note 2, allow 50' per point | 7,800 | lf | 9.50 | 74,100 | | |
| 2019 | 4x4x4" box | 8 | ea | | | | |
| 2020 | 8x8x4" box | 24 | ea | | | | |
| 2021 | 10x10x4" box | 2 | ea | 100.00 | 200 | | |
| 2022 | 12x12x4" box | 4 | ea | | | | |
| 2023 | 12x12x6" box | 6 | ea | 150.00 | 900 | | |
| 2024 | 1 gang back box | 16 | ea | 29.40 | 470 | | |
| 2025 | 2 gang back box | 4 | ea | 39.00 | 156 | | |
| 2026 | 3 gang back box | 9 | ea | 49.00 | 441 | | |
| 2027 | 4 gang back box | 18 | ea | 58.00 | 1,044 | | |
| 2028 | Box as required | 2 | ea | 500.00 | 1,000 | | |
| 2029 | Speaker, assumes comes with back box | 103 | ea | | | Included | |
| 2030 | Loudspeaker back box | 2 | ea | 150.00 | 300 | | |
| 2031 | <u>Security System</u> | | | | | | |
| 2032 | Head end | 1 | ls | 30,000.00 | 30,000 | | |
| 2033 | CCTV camera type 1 | 35 | ea | 750.00 | 26,250 | | |
| 2034 | CCTV camera type 2 | 29 | ea | 750.00 | 21,750 | | |
| 2035 | CCTV camera 180 type 7 | 18 | ea | 1,200.00 | 21,600 | | |
| 2036 | CCTV camera 360 type 8 | 61 | ea | 1,200.00 | 73,200 | | |
| 2037 | CCTV camera WP type 22 | 4 | ea | 950.00 | 3,800 | | |
| 2038 | CCTV camera 180 WP | 1 | ea | 1,500.00 | 1,500 | | |
| 2039 | CCTV camera 180 WP type 26 | 3 | ea | 1,500.00 | 4,500 | | |
| 2040 | CCTV camera 180 WP type 27 | 5 | ea | 1,500.00 | 7,500 | | |
| 2041 | Rough-in | | | | | | |
| 2042 | Device box with conduit stub to accessible ceiling | 156 | ea | 85.00 | 13,260 | | |
| 2043 | Cabling | 16,000 | lf | 1.25 | 20,000 | | |
| 2044 | <u>Access Control System</u> | | | | | | |
| 2045 | Head end including workstation with video display for programming & auditing | 1 | ls | 70,000.00 | 70,000 | | |
| 2046 | BR biometric reader | 2 | ea | 850.00 | 1,700 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | ESTD COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|--------|------|--------------|--------------|--------------|---------------------|
| NEW CONSTRUCTION | | | | | | | |
| 2047 | Card reader | 77 | ea | 600.00 | 46,200 | | |
| 2048 | Curtain motion sensor | 2 | ea | 200.00 | 400 | | |
| 2049 | Delayed release exit lock | 4 | ea | 120.00 | 480 | | |
| 2050 | DMA | 1 | ea | 850.00 | 850 | | |
| 2051 | Door contact | 87 | ea | 200.00 | 17,400 | | |
| 2052 | Door release button | 8 | ea | 150.00 | 1,200 | | |
| 2053 | Duress button | 14 | ea | 150.00 | 2,100 | | |
| 2054 | Electric strike | 1 | ea | 120.00 | 120 | | |
| 2055 | Electrified lever lockset | 4 | ea | 150.00 | 600 | | |
| 2056 | Keypad | 6 | ea | 500.00 | 3,000 | | |
| 2057 | Local door alarm | 9 | ea | 150.00 | 1,350 | | |
| 2058 | Low voltage power supply | 42 | ea | 150.00 | 6,300 | | |
| 2059 | Motion sensor | 55 | ea | 225.00 | 12,375 | | |
| 2060 | VIC video intercom substation | 6 | ea | 850.00 | 5,100 | | |
| 2061 | VIM video intercom master station | 5 | ea | 1,500.00 | 7,500 | | |
| 2062 | VMC video management client | 5 | ea | 1,000.00 | 5,000 | | |
| 2063 | Door release device connection (device by Div 8) | 8 | ea | 80.00 | 640 | | |
| 2064 | Electric latch retraction device connection (device by Div 8) | 3 | ea | 80.00 | 240 | | |
| 2065 | Electric latch retraction panic hardware device connection (device by Div 8) | 111 | ea | 80.00 | 8,880 | | |
| 2066 | Request to exit device connection (device by Div 8) | 1 | ea | 80.00 | 80 | | |
| 2067 | Shooting detection sensor | 65 | ea | 500.00 | 32,500 | | |
| 2068 | Allow for shooting detector sensor system not yet detailed, includes labor, rough-in & cabling | 1 | ls | 160,000.00 | 160,000 | | |
| 2069 | High/low temperature sensor allowance | 1 | ls | 41,000.00 | 41,000 | | |
| 2070 | On-floor water sensor and processor allowance | 1 | ls | 41,000.00 | 41,000 | | |
| 2071 | Rough-in | | | | | | |
| 2072 | 3/4" conduit to door junction box | 53 | ea | 85.00 | 4,505 | | |
| 2073 | 1" conduit to door junction box | 1 | ea | 95.00 | 95 | | |
| 2074 | 1" conduit to accessible ceiling | 77 | ea | 90.00 | 6,930 | | |
| 2075 | 4" square box with 3/4" conduit stub to accessible ceiling | 1 | ea | 85.00 | 85 | | |
| 2076 | 4" square box with 3/4" conduit stub to door junction box | 191 | ea | 85.00 | 16,235 | | |
| 2077 | Device box with conduit stub to accessible ceiling | 166 | ea | 85.00 | 14,110 | | |
| 2078 | Cabling | 35,000 | lf | 1.10 | 38,500 | | |
| 2079 | <u>Lightning Protection</u> | | | | | | |
| 2080 | Lightning protection system, allow | 1 | ls | 175,000.00 | 175,000 | | |
| 2081 | SUBTOTAL | | | | | 5,411,406 | |
| 2082 | | | | | | | |
| 2083 | D5040 OTHER ELECTRICAL SYSTEMS | | | | | | |
| 2084 | <u>Common Work Results</u> | | | | | | |
| 2085 | Grounding & bonding | 1 | ls | 25,000.00 | 25,000 | | |
| 2086 | Coordination study and testing | 1 | ls | 15,000.00 | 15,000 | | |
| 2087 | Seismic restraints | 1 | ls | 10,000.00 | 10,000 | | |
| 2088 | Identification | 1 | ls | 2,500.00 | 2,500 | | |
| 2089 | Fire stopping | 1 | ls | 2,500.00 | 2,500 | | |
| 2090 | Rigging | 1 | ls | 15,000.00 | 15,000 | | |
| 2091 | Shop drawings | 1 | ls | 2,500.00 | 2,500 | | |
| 2092 | Temp power and lights | 1 | ls | 250,000.00 | 250,000 | | |
| 2093 | Coordination, BIM | 1 | ls | 275,000.00 | 275,000 | | |
| 2094 | Permits and fees | 1 | ls | 350,000.00 | Waived | | |
| 2095 | SUBTOTAL | | | | | 597,500 | |
| 2096 | | | | | | | |
| 2097 | TOTAL - ELECTRICAL | | | | | | \$19,564,937 |
| 2098 | | | | | | | |
| 2099 | | | | | | | |
| 2100 | E10 EQUIPMENT | | | | | | |
| 2101 | | | | | | | |
| 2102 | E10 EQUIPMENT, GENERALLY | | | | | | |
| 2103 | | | | | | | |
| 2104 | 111300 LOADING DOCK EQUIPMENT | | | | | | |
| 2105 | Loading dock bumpers | 1 | ls | 5,000.00 | 5,000 | | |
| 2106 | | | | | | | |
| 2107 | 114500 APPLIANCES | | | | | | |
| 2108 | Full Size Fridge | 21 | ea | 1,600.00 | 33,600 | | |
| 2109 | UC Fridge | 16 | ea | 1,000.00 | 16,000 | | |
| 2110 | Full Size Freezer | 2 | ea | 2,000.00 | 4,000 | | |
| 2111 | UC Freezer | 1 | ea | 1,500.00 | 1,500 | | |
| 2112 | Microwave | 32 | ea | 500.00 | 16,000 | | |
| 2113 | Washer | 5 | ea | 1,500.00 | 7,500 | | |
| 2114 | Dryer | 5 | ea | 1,500.00 | 7,500 | | |
| 2115 | Dishwasher | 12 | ea | 1,000.00 | 12,000 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2116 | Wall Oven | 6 | ea | 1,000.00 | 6,000 | | |
| 2117 | Cook stove | 10 | ea | 1,500.00 | 15,000 | | |
| 2118 | Exhaust Hood | 13 | ea | 500.00 | 6,500 | | |
| 2119 | ADA Cooktop | 8 | ea | 1,500.00 | 12,000 | | |
| 2120 | Ice Machine | 1 | ea | 4,000.00 | 4,000 | | |
| 2121 | Ice Maker | 2 | ea | 1,500.00 | 3,000 | | |
| 2122 | | | | | | | |
| 2123 | 114000 FOODSERVICE EQUIPMENT | | | | | | |
| 2124 | Kitchen equipment (per Kitteridge Budget) | 1 | ls | 700,848.00 | 700,848 | | |
| 2125 | | | | | | | |
| 2126 | 116000 LABORATORY EQUIPMENT | | | | | | |
| 2127 | Fume Hoods, ductless | 7 | ea | 32,500.00 | 227,500 | | |
| 2128 | | | | | | | |
| 2129 | 116200 THEATRE EQUIPMENT | | | | | | |
| 2130 | <u>Audiovisual Systems & Projection Screens</u> | | | | | | |
| 2131 | Auditorium | 1 | ls | 270,000.00 | w/ electrical | | |
| 2132 | Black Box | 1 | ls | 75,000.00 | w/ electrical | | |
| 2133 | Chorus Room | 1 | ls | 12,000.00 | w/ electrical | | |
| 2134 | Band Room | 1 | ls | 12,000.00 | w/ electrical | | |
| 2135 | Production Lab | 1 | ls | 30,000.00 | w/ electrical | | |
| 2136 | Amphitheater | 1 | ls | 25,000.00 | w/ electrical | | |
| 2137 | <u>Theatrical Lighting Systems & Fixtures</u> | | | | | | |
| 2138 | Main Theater | 1 | ls | 235,000 | w/ electrical | | |
| 2139 | Black Box | 1 | ls | 105,000 | w/ electrical | | |
| 2140 | Amphitheater | 1 | ls | 40,000 | w/ electrical | | |
| 2141 | <u>Theatrical Equipment</u> | | | | | | |
| 2142 | Auditorium Rigging | 1 | ls | 599,735.00 | 599,735 | | |
| 2143 | Auditorium Platforms | 1 | ls | 102,420.00 | 102,420 | | |
| 2144 | Auditorium Orchestra Ceiling Panels | 1 | ls | 141,925.00 | 141,925 | | |
| 2145 | Black Box Theater | 1 | ls | 45,000.00 | Incl. above | | |
| 2146 | Black Box, Platforms | 1 | ls | 55,000.00 | F,F & E | | |
| 2147 | | | | | | | |
| 2148 | 126100 FIXED AUDIENCE SEATING | | | | | | |
| 2149 | Auditorium fixed seating | 736 | ea | 360.00 | 264,960 | | |
| 2150 | Auditorium loose seating | 81 | ea | 290.00 | 23,490 | | |
| 2151 | DLab fixed seating | 120 | ea | 360.00 | 43,200 | | |
| 2152 | | | | | | | |
| 2153 | 116600 ATHLETIC EQUIPMENT | | | | | | |
| 2154 | Gym wall pads | 1,537 | sf | 17.00 | 26,129 | | |
| 2155 | Pre-k multipurpose wall pads | 520 | sf | 17.00 | 8,840 | | |
| 2156 | Small gym wall pads | 1,687 | sf | 17.00 | 28,679 | | |
| 2157 | Basketball backstops; swing up; electric operated | 7 | ea | 10,000.00 | 70,000 | | |
| 2158 | Gymnasium dividing net; electrically operated | 1 | loc | 46,512.00 | 46,512 | | |
| 2159 | Rock climbing wall, quote provided | 1 | ls | 159,500.00 | 159,500 | | |
| 2160 | Volleyball net and standards | 2 | ls | 5,000.00 | 10,000 | | |
| 2161 | Score boards in Gym (per specifications) | 2 | loc | 25,000.00 | 50,000 | | |
| 2162 | Shot clocks in Gym (per specifications) | 6 | loc | 1,500.00 | 9,000 | | |
| 2163 | Climbing ropes (per specifications) | 2 | loc | 2,500.00 | NIC | | |
| 2164 | Motorized retractable practice cages at gym (per specifications) | 1 | loc | 10,000.00 | 10,000 | | |
| 2165 | Wrestling mat hoist system (per specifications) | 1 | loc | 8,000.00 | NIC | | |
| 2166 | Wrestling mat roll-up storage system, overhead | 1 | loc | 10,000.00 | 10,000 | | |
| 2167 | | | | | | | |
| 2168 | 119000 MISCELLANEOUS EQUIPMENT | | | | | | |
| 2169 | Vocation and technology equipment, allowance | 1 | ls | 50,000.00 | F,F & E | | |
| 2170 | Kiln | 1 | ea | 5,000.00 | 5,000 | | |
| 2171 | 3D printer | 1 | ea | | F,F & E | | |
| 2172 | Drying rack | 1 | ea | | F,F & E | | |
| 2173 | Engraver | 1 | ea | | F,F & E | | |
| 2174 | Hydrocollator | 1 | ea | | F,F & E | | |
| 2175 | Pottery wheel | 6 | ea | | F,F & E | | |
| 2176 | Print press | 1 | ea | | F,F & E | | |
| 2177 | Slab roller | 1 | ea | | F,F & E | | |
| 2178 | Wedging board | 1 | ea | | F,F & E | | |
| 2179 | Whirlpool | 1 | ea | | F,F & E | | |
| 2180 | | | | | | | |
| 2181 | 126600 TELESCOPING STANDS | | | | | | |
| 2182 | Telescoping bleachers (1915 seats) | 1 | ls | 344,700.00 | 344,700 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

SUBTOTAL

3,032,038

TOTAL - EQUIPMENT

\$3,032,038

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

122100 WINDOW TREATMENT

| | | | | |
|--|--------|----|-------|------------|
| Room darkening shades, manual | 18,600 | sf | 7.00 | 130,200 |
| Room darkening shades, motorized | 1,590 | sf | 20.00 | 31,800 |
| Dual shades, manual | 1,390 | sf | 18.00 | 25,020 |
| Motorized shades, blackout | 360 | sf | 20.00 | 7,200 |
| Motorized shades atskylights | | sf | | w/ roofing |
| Interior blinds at borrowed lights | 7,384 | sf | 8.00 | 59,072 |
| Interior blackout shades at borrowed lights, manual | 490 | sf | 9.00 | 4,410 |
| Interior blackout shades at borrowed lights, motorized | 385 | sf | 20.00 | 7,700 |

123000 CASEWORK

Art classrooms

| | | | | |
|--|----|----|----------|--------|
| Base cabinet with epoxy resin countertop | 60 | lf | 500.00 | 30,000 |
| TS 36" | 6 | ea | 1,800.00 | 10,800 |
| TW 36" | 4 | ea | 1,800.00 | 7,200 |
| Upper cabinet | 60 | lf | 300.00 | 18,000 |

Band/Music Storage/Chorus

| | | | | |
|--|----|----|----------|--------|
| Base cabinet with solid surface countertop | 18 | lf | 450.00 | 8,100 |
| TW 36" | 3 | ea | 1,800.00 | 5,400 |
| Upper cabinet | 18 | lf | 300.00 | 5,400 |
| Music storage | 66 | lf | 800.00 | 52,800 |

Compass Kitchen/Laundry

| | | | | |
|--|----|----|----------|--------|
| Base cabinet with solid surface countertop | 35 | lf | 450.00 | 15,750 |
| Oven/Microwave surround 27" | 1 | ea | 1,500.00 | 1,500 |
| TW 36" | 1 | ea | 1,800.00 | 1,800 |
| Upper cabinet | 13 | lf | 300.00 | 3,900 |

Copy/mail rooms

| | | | | |
|--|----|----|----------|-------|
| Base cabinet with solid surface countertop | 14 | lf | 450.00 | 6,300 |
| Mail slots - 4 tier | 12 | lf | 225.00 | 2,700 |
| TS 36" | 1 | ea | 1,800.00 | 1,800 |
| Upper cabinet | 19 | lf | 300.00 | 5,700 |

Copy/workroom

| | | | | |
|--|----|----|--------|-------|
| Base cabinet with solid surface countertop | 11 | lf | 450.00 | 4,950 |
| Upper cabinet | 11 | lf | 300.00 | 3,300 |
| Daycare kitchen | | | | |
| Base cabinet with solid surface countertop | 12 | lf | 450.00 | 5,400 |

| | | | | |
|---------------|----|----|----------|-------|
| Upper cabinet | 12 | lf | 300.00 | 3,600 |
| TS 36" | 2 | ea | 1,800.00 | 3,600 |

District entry

| | | | | |
|--|---|----|--------|-------|
| Base cabinet with solid surface countertop | 5 | lf | 450.00 | 2,250 |
| Mail slots - 4 tier | 5 | lf | 225.00 | 1,125 |

Dressing rooms

| | | | | |
|-------------------------|----|----|--------|--------|
| Single tier upper shelf | 51 | lf | 75.00 | 3,825 |
| Wall hung plam counter | 78 | lf | 250.00 | 19,500 |

FACS

| | | | | |
|--|-----|----|----------|--------|
| Base cabinet with solid surface countertop | 159 | lf | 450.00 | 71,550 |
| Oven/Microwave surround 27" | 2 | ea | 1,500.00 | 3,000 |
| Teacher demo table 6'-6" wide | 2 | ea | 2,500.00 | 5,000 |
| TS 36" | 10 | ea | 1,800.00 | 18,000 |
| Upper cabinet | 120 | lf | 300.00 | 36,000 |

Interview

| | | | | |
|--|----|----|--------|-------|
| Base cabinet with solid surface countertop | 20 | lf | 450.00 | 9,000 |
| Upper cabinet | 18 | lf | 300.00 | 5,400 |

LABBB

| | | | | |
|--|----|----|--------|--------|
| Base cabinet with solid surface countertop | 34 | lf | 450.00 | 15,300 |
|--|----|----|--------|--------|



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-----|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2247 | Oven/Microwave surround 27" | 1 | ea | 1,500.00 | 1,500 | | |
| 2248 | TS 36" | 3 | ea | 1,800.00 | 5,400 | | |
| 2249 | Upper cabinet | 39 | lf | 300.00 | 11,700 | | |
| 2250 | <u>Language lab</u> | | | | | | |
| 2251 | Base cabinet with solid surface countertop | 17 | lf | 450.00 | 7,650 | | |
| 2252 | Oven/Microwave surround 27" | 1 | ea | 1,500.00 | 1,500 | | |
| 2253 | Upper cabinet | 9 | lf | 300.00 | 2,700 | | |
| 2254 | <u>Kitchen</u> | | | | | | |
| 2255 | Base cabinet with solid surface countertop | 18 | lf | 450.00 | 8,100 | | |
| 2256 | Oven/Microwave surround 27" | 1 | ea | 1,500.00 | 1,500 | | |
| 2257 | Upper cabinet | 18 | lf | 300.00 | 5,400 | | |
| 2258 | <u>LLC - work</u> | | | | | | |
| 2259 | Base cabinet with solid surface countertop | 8 | lf | 450.00 | 3,600 | | |
| 2260 | Upper cabinet | 8 | lf | 300.00 | 2,400 | | |
| 2261 | <u>Maker CADD lab</u> | | | | | | |
| 2262 | Base cabinet with epoxy resin countertop | 6 | lf | 500.00 | 3,000 | | |
| 2263 | TS 36" | 2 | ea | 1,800.00 | 3,600 | | |
| 2264 | <u>Millbrook lunch</u> | | | | | | |
| 2265 | Base cabinet with solid surface countertop | 9 | lf | 450.00 | 4,050 | | |
| 2266 | Oven/Microwave surround 27" | 1 | ea | 1,500.00 | 1,500 | | |
| 2267 | Upper cabinet | 9 | lf | 300.00 | 2,700 | | |
| 2268 | <u>Mother's room</u> | | | | | | |
| 2269 | Base cabinet with solid surface countertop | 7 | lf | 450.00 | 3,150 | | |
| 2270 | Upper cabinet | 7 | lf | 300.00 | 2,100 | | |
| 2271 | <u>Nurse</u> | | | | | | |
| 2272 | Base cabinet with solid surface countertop | 13 | lf | 450.00 | 5,850 | | |
| 2273 | Upper cabinet | 13 | lf | 300.00 | 3,900 | | |
| 2274 | <u>Preschool classrooms</u> | | | | | | |
| 2275 | Base cabinet with solid surface countertop | 81 | lf | 450.00 | 36,450 | | |
| 2276 | TS 36" | 18 | ea | 1,800.00 | 32,400 | | |
| 2277 | Upper cabinet | 81 | lf | 300.00 | 24,300 | | |
| 2278 | TS 36" | 2 | ea | 1,800.00 | 3,600 | | |
| 2279 | <u>Preschool teacher lunch</u> | | | | | | |
| 2280 | Base cabinet with solid surface countertop | 11 | lf | 450.00 | 4,950 | | |
| 2281 | Upper cabinet | 11 | lf | 300.00 | 3,300 | | |
| 2282 | <u>Production lab</u> | | | | | | |
| 2283 | TS 36" | 2 | ea | 1,800.00 | 3,600 | | |
| 2284 | <u>Science classrooms</u> | | | | | | |
| 2285 | Base cabinet with epoxy resin countertop | 984 | lf | 500.00 | 492,000 | | |
| 2286 | Teacher demo table | 17 | ea | 3,300.00 | 56,100 | | |
| 2287 | Upper cabinets | 900 | lf | 300.00 | 270,000 | | |
| 2288 | <u>Science prep</u> | | | | | | |
| 2289 | Base cabinet with epoxy resin countertop | 189 | lf | 500.00 | 94,500 | | |
| 2290 | TS 36" | 17 | ea | 1,800.00 | 30,600 | | |
| 2291 | Upper cabinets | 189 | lf | 300.00 | 56,700 | | |
| 2292 | <u>Smart center</u> | | | | | | |
| 2293 | Base cabinet with solid surface countertop | 20 | lf | 450.00 | 9,000 | | |
| 2294 | TS 36" | 2 | ea | 1,800.00 | 3,600 | | |
| 2295 | Upper cabinet | 14 | lf | 300.00 | 4,200 | | |
| 2296 | <u>Staff lunch</u> | | | | | | |
| 2297 | Base cabinet with solid surface countertop | 12 | lf | 450.00 | 5,400 | | |
| 2298 | Upper cabinet | 12 | lf | 300.00 | 3,600 | | |
| 2299 | <u>Teacher planning</u> | | | | | | |
| 2300 | Base cabinet with solid surface countertop | 116 | lf | 450.00 | 52,200 | | |
| 2301 | Upper cabinet | 144 | lf | 300.00 | 43,200 | | |
| 2302 | <u>Typical classroom</u> | 72 | rms | | | | |
| 2303 | Tall storage 48" | 72 | ea | 2,400.00 | 172,800 | | |
| 2304 | TS 30" | 72 | ea | 1,500.00 | 108,000 | | |
| 2305 | TW 30" | 72 | ea | 1,500.00 | 108,000 | | |
| 2306 | <u>Trainer</u> | | | | | | |
| 2307 | Base cabinet with solid surface countertop | 11 | lf | 450.00 | 4,950 | | |
| 2308 | TS 36" | 1 | ea | 1,800.00 | 1,800 | | |
| 2309 | Upper cabinet | 17 | lf | 300.00 | 5,100 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|------|--|--------|-----|------------|------------|-----------|--------------------|
| 2310 | <u>Workplace storage</u> | | | | | | |
| 2311 | Base cabinet with solid surface countertop | 7 | lf | 450.00 | 3,150 | | |
| 2312 | TS 36" | 1 | ea | 1,800.00 | 1,800 | | |
| 2313 | Upper cabinet | 7 | lf | 300.00 | 2,100 | | |
| 2314 | <u>Miscellaneous</u> | | | | | | |
| 2315 | TS 36" | 4 | ea | 1,800.00 | 7,200 | | |
| 2316 | | | | | | | |
| 2317 | 124810 ENTRANCE FLOOR MAT AND FRAMES | | | | | | |
| 2318 | Recessed entrance mats | | sf | 55.00 | none shown | | |
| 2319 | Walk off mats; EM-2 | 1,680 | sf | 15.00 | 25,200 | | |
| 2320 | Walk off mats; EM-3 | 2,740 | sf | 15.00 | 41,100 | | |
| 2321 | SUBTOTAL | | | | | 2,445,552 | |
| 2322 | | | | | | | |
| 2323 | E2020 MOVABLE FURNISHINGS | | | | | | |
| 2324 | All movable furnishings to be provided and installed by owner | | | | | | |
| 2325 | | | | | | | |
| 2326 | SUBTOTAL | | | | | NIC | |
| 2327 | TOTAL - FURNISHINGS | | | | | | \$2,445,552 |
| 2328 | | | | | | | |
| 2329 | | | | | | | |
| 2330 | F10 SPECIAL CONSTRUCTION | | | | | | |
| 2331 | | | | | | | |
| 2332 | F10 SPECIAL CONSTRUCTION | | | | | | |
| 2333 | CONSTRUCT TEMPORARY PARKING TO OFF-SET CONSTRUCTION AREA | | | | | | |
| 2334 | Fence at temporary parking - basketball court | 617 | lf | 38.00 | NR | | |
| 2335 | Fence at PH 1 | 6,340 | lf | 38.00 | w/ EBP#2 | | |
| 2336 | Fence at PH 2 | 952 | lf | 38.00 | 36,176 | | |
| 2337 | Fence at PH 3 | 649 | lf | 38.00 | 24,662 | | |
| 2338 | Fence at PH 4 | 2,426 | lf | 38.00 | 92,188 | | |
| 2339 | Construction gates - phasing and parking | 6 | ea | 2,000.00 | 12,000 | | |
| 2340 | Restriping basketball courts for parking | 16,200 | sf | 0.50 | w/ EBP#2 | | |
| 2341 | Restriping existing roads/parking for temp parking | 40,855 | sf | 0.50 | w/ EBP#2 | | |
| 2342 | Infill islands for temporary parking | 5,153 | sf | 5.00 | w/ EBP#2 | | |
| 2343 | Temporary parking/laydown; assumed for contractor use; gravel base only | 25,000 | sf | 2.50 | w/ EBP#2 | | |
| 2344 | Temporary parking/laydown; assumed for contractor use; gravel base only EBP#2 MAJORITY | 75,000 | sf | 2.50 | w/ EBP#2 | | |
| 2345 | Temporary front access road | 5,000 | sf | 10.00 | w/ EBP#2 | | |
| 2346 | Temporary egress path; sidewalk | 8,100 | sf | 4.00 | see below | | |
| 2347 | PH2 Temporary access; exterior | 1 | ls | 50,000.00 | see below | | |
| 2348 | PH3 Temporary covered walkway | 1 | ls | 15,000.00 | see below | | |
| 2349 | SUBTOTAL Temporary Sitework | | | | | 165,026 | |
| 2350 | | | | | | | |
| 2351 | Salvage clock mechanism | 1 | ls | 1,000.00 | included | | |
| 2352 | Salvage, repair and store Fusco stone entry façade | 1 | ls | 200,000.00 | included | | |
| 2353 | Salvage, repair, store and reinstall Fusco wood panel | 1 | ls | 15,000.00 | included | | |
| 2354 | Salvage Old Hall proscenium | 1 | ls | 10,000.00 | included | | |
| 2355 | Salvage Old Hall plaster friezes | 1 | ls | 4,000.00 | included | | |
| 2356 | Salvage, repair, store and reinstall River of Hands mosaic | 1 | ls | 20,000.00 | included | | |
| 2357 | SUBTOTAL Salvage + Repair Work | | | | | - | |
| 2358 | | | | | | | |
| 2359 | | | | | | | |
| 2360 | EBP3 | | | | | | |
| 2361 | <u>Phase 1 Downs Building</u> | | | | | | |
| 2362 | Demo | | | | | | |
| 2363 | Cut new opening in plaster and stud as required for new work | 1 | loc | 1,500.00 | EBP #3 | | |
| 2364 | Cut new opening in GWB wall as required for new work | 1 | loc | 1,000.00 | EBP #3 | | |
| 2365 | Remove plaster and stud partition complete | 319 | sf | 6.00 | EBP #3 | | |
| 2366 | Remove gwb and stud partition complete | 297 | sf | 3.00 | EBP #3 | | |
| 2367 | Remove existing folding wall, and door | 275 | sf | 15.00 | EBP #3 | | |
| 2368 | Remove lockers and cmu base- lockers | 11 | ea | 50.00 | EBP #3 | | |
| 2369 | Remove lockers and cmu base- cmu base sawcut and demo | 11 | lf | 35.00 | EBP #3 | | |
| 2370 | Remove double doors | 2 | lvs | 150.00 | EBP #3 | | |
| 2371 | Shower room demo | 680 | sf | 15.00 | EBP #3 | | |
| 2372 | Remove existing shower valve cabinet | | | | EBP #3 | | |
| 2373 | Remove benches | | | | EBP #3 | | |
| 2374 | Remove lockers | | | | EBP #3 | | |
| 2375 | Remove flooring | | | | EBP #3 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2376 | Salvage lockers for reuse | 96 | ea | 50.00 | EBP #3 | | |
| 2377 | Individual toilet room demo | 196 | sf | 15.00 | EBP #3 | | |
| 2378 | Remove existing light fixtures | | | | EBP #3 | | |
| 2379 | Remove existing mechanical units cabinets and fintube radiator | | | | EBP #3 | | |
| 2380 | Remove MEPFP scope after disconnection by trades | 3,856 | gfa | 3.00 | EBP #3 | | |
| 2381 | Misc Demo | 3,856 | gfa | 1.00 | EBP #3 | | |
| 2382 | Demo trenching for new bathrooms | 70 | sf | 25.00 | EBP #3 | | |
| 2383 | Protection of adjacent/ existing | 3,856 | gfa | 1.00 | EBP #3 | | |
| 2384 | | | | | | | |
| 2385 | Fitout/ New Construction | | | | | | |
| 2386 | <u>Floor finishes</u> | | | | | | |
| 2387 | A2 ETR- protect existing floors | 119 | sf | 1.10 | EBP #3 | | |
| 2388 | A2 ETR- minor patching -20% | 24 | sf | 12.00 | EBP #3 | | |
| 2389 | A1 ETR- protect existing floors | 168 | sf | 1.10 | EBP #3 | | |
| 2390 | A1 ETR- minor patching -20% incl demo | 168 | sf | 12.00 | EBP #3 | | |
| 2391 | A1 base replacement 20% Incl demo | 10 | lf | 4.00 | EBP #3 | | |
| 2392 | C1 ETR- protect existing floors | 650 | sf | 1.10 | EBP #3 | | |
| 2393 | C1 ETR- minor patching -20% incl demo | 130 | sf | 12.00 | EBP #3 | | |
| 2394 | C1 base replacement 20% | 109 | lf | 4.00 | EBP #3 | | |
| 2395 | C2 ETR- protect existing floors | 1,613 | sf | 1.10 | EBP #3 | | |
| 2396 | C2 ETR- minor patching -20% | 323 | sf | 12.00 | EBP #3 | | |
| 2397 | C3- Floor prep | 728 | sf | 4.00 | EBP #3 | | |
| 2398 | C3 New RF | 728 | sf | 10.00 | EBP #3 | | |
| 2399 | C3 New RB | 227 | lf | 3.00 | EBP #3 | | |
| 2400 | D2 ETR- protect existing floors | 158 | sf | 1.10 | EBP #3 | | |
| 2401 | D2 ETR- minor patching -20% incl demo (tile) | 32 | sf | 25.00 | EBP #3 | | |
| 2402 | D2 base replacement 20% | 16 | lf | 16.00 | EBP #3 | | |
| 2403 | E2 ETR- protect existing floors | 112 | sf | 1.10 | EBP #3 | | |
| 2404 | E2 ETR- minor patching -20% | 22 | sf | 12.00 | EBP #3 | | |
| 2405 | A3 ETR- protect existing floors | 61 | sf | 1.10 | EBP #3 | | |
| 2406 | A3 ETR- minor patching -20% | 12 | sf | 12.00 | EBP #3 | | |
| 2407 | Rollup mat 9'-0" x 6'-0" | 1 | ea | 750.00 | EBP #3 | | |
| 2408 | <u>Ceiling Finishes</u> | | | | | | |
| 2409 | ACT Ceilings 2 x 2 | 380 | sf | 8.00 | EBP #3 | | |
| 2410 | Paint exposed | 2,800 | sf | 1.00 | EBP #3 | | |
| 2411 | <u>Wall Finishes</u> | | | | | | |
| 2412 | Paint new walls | 7,265 | sf | 1.75 | EBP #3 | | |
| 2413 | Paint existing | 4,000 | sf | 1.75 | EBP #3 | | |
| 2414 | Paint HM Frames | 18 | ea | 175.00 | EBP #3 | | |
| 2415 | <u>Walls</u> | | | | | | |
| 2416 | Wall type 01 A, 6" MS, 1 lyr GWB ea side, SAB | 209 | sf | 14.50 | EBP #3 | | |
| 2417 | Wall type 01 B, 3-5/8" MS, 1 lyr GWB ea side, SAB | 3,102 | sf | 11.00 | EBP #3 | | |
| 2418 | Wall type 02A, 6" MS, 1 lyr GWB one side, 2 lyrs opp,SAB | 66 | sf | 17.00 | EBP #3 | | |
| 2419 | Wall type 08B furring, 3-5/8" studs | 198 | sf | 10.00 | EBP #3 | | |
| 2420 | Wall type 08D furring, 2-1/2" studs | 77 | sf | 8.00 | EBP #3 | | |
| 2421 | Furring wall detail 15 | 236 | sf | 12.00 | EBP #3 | | |
| 2422 | GWB interface detail at existing glass detail 1 | 3 | loc | 700.00 | EBP #3 | | |
| 2423 | <u>Misc</u> | | | | | | |
| 2424 | In wall Blocking | 1,173 | lf | 3.00 | EBP #3 | | |
| 2425 | Sealants | 391 | lf | 4.00 | EBP #3 | | |
| 2426 | Patching existing walls | 4,000 | sf | 3.00 | EBP #3 | | |
| 2427 | Install existing salvaged office partition | 1 | ls | 200.00 | EBP #3 | | |
| 2428 | Install salvaged items | 1 | ls | 600.00 | EBP #3 | | |
| 2429 | <u>Doors</u> | | | | | | |
| 2430 | Type A, WD, Frame and hardware | 11 | ea | 1,255.00 | EBP #3 | | |
| 2431 | Install | 11 | ea | 325.00 | EBP #3 | | |
| 2432 | Type B, WD, Frame and hardware | 2 | ea | 1,300.00 | EBP #3 | | |
| 2433 | Install | 2 | ea | 325.00 | EBP #3 | | |
| 2434 | Glazing | 2 | ea | 125.00 | EBP #3 | | |
| 2435 | Type C, WD, Frame and hardware | 4 | ea | 1,255.00 | EBP #3 | | |
| 2436 | Install | 4 | ea | 325.00 | EBP #3 | | |
| 2437 | Glazing | 4 | ea | 200.00 | EBP #3 | | |
| 2438 | Type G, WD, Frame and hardware | 1 | ea | 1,255.00 | EBP #3 | | |
| 2439 | Install | 1 | ea | 325.00 | EBP #3 | | |
| 2440 | Louver | 1 | ea | 75.00 | EBP #3 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2441 | Blocking | 306 | lf | 3.00 | EBP #3 | | |
| 2442 | Sealants | 306 | lf | 4.00 | EBP #3 | | |
| 2443 | <u>Specialties/ Millwork/ Casework</u> | | | | | | |
| 2444 | New accessories @ bathrooms | 3 | rms | 900.00 | EBP #3 | | |
| 2445 | Pass through mirror @ vestibule, track | 1 | ea | 3,000.00 | EBP #3 | | |
| 2446 | Counter @ pass through | 4 | lf | 250.00 | EBP #3 | | |
| 2447 | Plam casework - exam room base cabinets | 6 | lf | 350.00 | EBP #3 | | |
| 2448 | Plam casework - exam room wall cabinets | 6 | lf | 250.00 | EBP #3 | | |
| 2449 | Countertops | 6 | lf | 150.00 | EBP #3 | | |
| 2450 | Misc metals | 1 | ls | 2,000.00 | EBP #3 | | |
| 2451 | | | | | | | |
| 2452 | <u>Phase 1 Auditorium Building</u> | | | | | | |
| 2453 | Demo | | | | | | |
| 2454 | Gen Demo - Remove all wall mounted boards, furniture rugs and AV Equipment | 4,300 | sf | 3.00 | EBP #3 | | |
| 2455 | Toilet room demo | 320 | sf | 15.00 | EBP #3 | | |
| 2456 | Remove all toilet accessories | | | | in above | | |
| 2457 | Remove all enclosure | | | | in above | | |
| 2458 | Remove plumbing fixtures after disconnection | | | | in above | | |
| 2459 | Remove flooring | | | | in above | | |
| 2460 | Remove office partition and doors | 490 | sf | 3.00 | EBP #3 | | |
| 2461 | Misc protect existing items to remain | 1 | ls | 2,500.00 | EBP #3 | | |
| 2462 | Remove existing light fixtures | | | | with Trades | | |
| 2463 | Remove existing mechanical units cabinets and fintube radiator | | | | with Trades | | |
| 2464 | Remove MEPFP scope after disconnection by trades | 4,500 | gfa | 1.00 | EBP #3 | | |
| 2465 | Fitout/ New Construction | | | | | | |
| 2466 | <u>Flooring- Bl, Cl, Al</u> | | | | | | |
| 2467 | ETR- protect existing floors | 3,846 | sf | 1.10 | EBP #3 | | |
| 2468 | ETR- minor patching -20% | 769 | sf | 12.00 | EBP #3 | | |
| 2469 | Rubber base- replace minor 20% | 119 | lf | 3.00 | EBP #3 | | |
| 2470 | Bathrooms minor patching infills | 1 | rm | 2,000.00 | EBP #3 | | |
| 2471 | Patch existing tile | 316 | sf | 5.00 | EBP #3 | | |
| 2472 | <u>Walls</u> | | | | | | |
| 2473 | Interior wall infill detail 17 | 1 | loc | 600.00 | EBP #3 | | |
| 2474 | Wall type 01 A, 6" MS, 1 lyr GWB ea side, SAB | 110 | sf | 14.50 | EBP #3 | | |
| 2475 | Misc | | | | | | |
| 2476 | Blocking in walls | 1 | ls | 500.00 | EBP #3 | | |
| 2477 | Sealants | 1 | ls | 500.00 | EBP #3 | | |
| 2478 | Door install | 1 | lvs | 325.00 | EBP #3 | | |
| 2479 | Patching-9' high | 5,373 | sf | 2.00 | EBP #3 | | |
| 2480 | Patching-9' high bathroom | 648 | sf | 3.00 | EBP #3 | | |
| 2481 | <u>Specialties/ Millwork/ Casework</u> | | | | | | |
| 2482 | New accessories @ bathrooms | 1 | rms | 2,000.00 | EBP #3 | | |
| 2483 | New Enclosures | 4 | ea | 1,300.00 | EBP #3 | | |
| 2484 | Misc metals | 1 | ls | 2,000.00 | EBP #3 | | |
| 2485 | Projection screen | 2 | ea | 3,500.00 | EBP #3 | | |
| 2486 | | | | | | | |
| 2487 | <u>HVAC; Early Bid Package #3 Phase 1</u> | | | | | | |
| 2488 | ERV-1,2 Energy recovery unit | 2 | ea | 5,500.00 | EBP #3 | | |
| 2489 | AC-1,2,3 Window air conditioner | 3 | ea | 900.00 | EBP #3 | | |
| 2490 | FCU-1,2 | 2 | ea | 1,600.00 | EBP #3 | | |
| 2491 | HP-1 Outdoor heat pump CU, 1.5 tons | 1 | ea | 4,000.00 | EBP #3 | | |
| 2492 | Fin tube radiation | 7 | ea | 700.00 | EBP #3 | | |
| 2493 | Electric wall heater | 2 | ea | 950.00 | EBP #3 | | |
| 2494 | Electric heating coil | 1 | ea | 900.00 | EBP #3 | | |
| 2495 | F-1 General exhaust fan | 1 | ea | 750.00 | EBP #3 | | |
| 2496 | F-2 Sidewall exhaust fan | 1 | ea | 1,500.00 | EBP #3 | | |
| 2497 | Galvanized ductwork with fittings & hangers | 3,500 | lbs | 15.00 | EBP #3 | | |
| 2498 | Duct insulation | 900 | sf | 8.00 | EBP #3 | | |
| 2499 | AC refrigerant piping with fittings & hangers | 280 | lf | 26.00 | EBP #3 | | |
| 2500 | Piping insulation | 280 | lf | 9.00 | EBP #3 | | |
| 2501 | Controls | 1 | ls | 25,000.00 | EBP #3 | | |
| 2502 | Testing & balancing | 1 | ls | 15,000.00 | EBP #3 | | |
| 2503 | Demolition | 1 | ls | 10,000.00 | EBP #3 | | |
| 2504 | | | | | | | |
| 2505 | <u>Fire Protection; Temporary Phasing Work</u> | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|---|-------|------|--------------|-------------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2506 | PH1 UG 6" water service piping (assume length) | 300 | lf | 61.00 | EBP #2 | | |
| 2507 | PH1 8" Main piping extend Fusco service | 240 | lf | 97.00 | EBP #2 | | |
| 2508 | PH1 4" Main piping re-feed riser in stair G3 | 220 | lf | 41.00 | EBP #2 | | |
| 2509 | PH1 Relocate FDC | 1 | ls | 8,000.00 | EBP #2 | | |
| 2510 | PH1 Swing space subdivide classes for admin/nurse | 1 | ls | 10,000.00 | EBP #3 | | |
| 2511 | | | | | | | |
| 2512 | <u>Electrical; Temporary Phasing Work</u> | | | | | | |
| 2513 | Temporary Phasing and relocation work per drawings | 1 | ls | 200,000.00 | EBP #3 | | |
| 2514 | SUBTOTAL PHASE 1 (EBP #3) | | | | | - | |
| 2515 | | | | | | | |
| 2516 | <u>Temp walls; PH1 (Not included in EBP#3)</u> | | | | | | |
| 2517 | Level 3& 4 New Building Temp wall (Red) | 5,808 | sf | | | | |
| 2518 | Temporary Exterior wall (Red) @new building | 5,808 | sf | 28.00 | 162,624 | | |
| 2519 | Temporary exterior wall; maintenance | 5,808 | sf | 1.50 | 8,712 | | |
| 2520 | Temporary exterior wall; demolition | 5,808 | sf | 2.00 | 11,616 | | |
| 2521 | Disconnect exist sign | 1 | ls | 2,500.00 | 2,500 | | |
| 2522 | Provide temporary pathway to mass avenue | 4,300 | sf | | with site (check) | | |
| 2523 | | | | | | | |
| 2524 | Phase 2 | | | | | | |
| 2525 | <u>Level 1</u> | | | | | | |
| 2526 | Pit - use at Temp PE | 3,227 | sf | 20.00 | 64,540 | | |
| 2527 | <u>Temp walls</u> | | | | | | |
| 2528 | Temporary Exterior wall (Orange) @ existing opening | 366 | sf | | - | | |
| 2529 | CMU, 8" | 66 | sf | 36.00 | 2,376 | | |
| 2530 | Temporary exterior wall; 16 Ga studs; sheathing; MB; 4" mineral wool insulation | 300 | sf | 28.00 | 8,400 | | |
| 2531 | Temporary exterior wall; maintenance | 366 | sf | 1.50 | 549 | | |
| 2532 | Temporary exterior wall; demolition | 366 | sf | 2.00 | 732 | | |
| 2533 | Demolition | | | | with Demo | | |
| 2534 | <u>Level 2</u> | | | | | | |
| 2535 | Temp drama classroom | 1,551 | gfa | 25.00 | 38,775 | | |
| 2536 | Temp server , café room; reuse existing equipment; minor work | 7,111 | gfa | 10.00 | 71,110 | | |
| 2537 | Maintain Elevator in use | | | | with GR"S | | |
| 2538 | Wall lift for ADA Ramp | 1 | ea | 100,000.00 | 100,000 | | |
| 2539 | <u>Temp walls</u> | | | | | | |
| 2540 | Temporary Exterior wall (Orange) @ existing opening | 450 | sf | 28.00 | 12,600 | | |
| 2541 | Temporary exterior wall; maintenance | 450 | sf | 1.50 | 675 | | |
| 2542 | Temporary exterior wall; demolition | 450 | sf | 2.00 | 900 | | |
| 2543 | Infill allowance | 450 | sf | 10.00 | 4,500 | | |
| 2544 | <u>Temp Roof</u> | | | | | | |
| 2545 | Temp Roof | 500 | sf | 30.00 | 15,000 | | |
| 2546 | <u>Level 3</u> | | | | | | |
| 2547 | Temp Library etc. | 4,800 | gfa | 20.00 | 96,000 | | |
| 2548 | Temp Offices | 750 | gfa | 10.00 | 7,500 | | |
| 2549 | Temp classrooms | 1,452 | gfa | 15.00 | 21,780 | | |
| 2550 | LABBB spaces, minor | 1,200 | gfa | 20.00 | 24,000 | | |
| 2551 | LABBB spaces, rework | 2,400 | gfa | 50.00 | 120,000 | | |
| 2552 | Interior ramp & stairs; Portable ramp; includes demo | 1 | ls | 48,437.60 | 48,438 | | |
| 2553 | Level 3 New Building Temp wall (Red)Extension (117' long to 224' long) . 117' in EBP | 1,664 | sf | | | | |
| 2554 | Temporary Exterior wall (Red) @new building | 1,664 | sf | 28.00 | 46,592 | | |
| 2555 | Temporary exterior wall; maintenance | 1,664 | sf | 1.50 | 2,496 | | |
| 2556 | Temporary exterior wall; demolition | 1,664 | sf | 2.00 | 3,328 | | |
| 2557 | Infills @ existing | | | | | | |
| 2558 | Infills/ temporary exterior wall; 16 Ga studs; sheathing; MB; 4" mineral wool insulation | 525 | sf | 28.00 | 14,700 | | |
| 2559 | Temporary exterior wall; maintenance | 525 | sf | 1.50 | 788 | | |
| 2560 | Temporary exterior wall; demolition | 525 | sf | 2.00 | 1,050 | | |
| 2561 | Infill allowance | 525 | sf | 10.00 | 5,250 | | |
| 2562 | <u>Bridge</u> | | | | | | |
| 2563 | Exterior bridge- complete; assume prefabricated structure; installation and removal | 1 | ls | 275,000.00 | 275,000 | | |
| 2564 | Ramp, with railings | 1 | ls | 70,000.00 | 70,000 | | |
| 2565 | Covered Bridge sprinklers/piping | 1 | ls | 4,500.00 | 4,500 | | |
| 2566 | Lighting | 1 | ls | 10,000.00 | 10,000 | | |
| 2567 | <u>Level 4</u> | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|------|---|-------|-----|------------|----------|--|--|
| 2568 | <u>Temp walls</u> | | | | | | |
| 2569 | Temporary Exterior wall (Orange) @ existing opening | 350 | sf | 28.00 | 9,800 | | |
| 2570 | Temporary exterior wall; maintenance | 350 | sf | 1.50 | 525 | | |
| 2571 | Temporary exterior wall; demolition | 350 | sf | 2.00 | 700 | | |
| 2572 | Infill allowance | 350 | sf | 10.00 | 3,500 | | |
| 2573 | Level 4 New Building Temp wall (Red)Extension (186' long to 236' long) | 800 | sf | | | | |
| 2574 | Temporary Exterior wall (Red) @new building | 800 | sf | 28.00 | 22,400 | | |
| 2575 | Temporary exterior wall; maintenance | 800 | sf | 1.50 | 1,200 | | |
| 2576 | Temporary exterior wall; demolition | 800 | sf | 2.00 | 1,600 | | |
| 2577 | Open to below- no scope anticipated | | | | n/a | | |
| 2578 | | | | | | | |
| 2579 | Stair Wall (See A1.2.4)- Temporary wall around entire stair well -see A1.2.4 | 1,220 | sf | | | | |
| 2580 | Temporary Exterior wall (Red) @new building | 1,220 | sf | 28.00 | 34,160 | | |
| 2581 | Temporary exterior wall; maintenance | 1,220 | sf | 1.50 | 1,830 | | |
| 2582 | Temporary exterior wall; demolition | 1,220 | sf | 2.00 | 2,440 | | |
| 2583 | Temporary pedestrian protection & access, P2 & 3 | 1 | ls | 220,000.00 | 220,000 | | |
| 2584 | Fusco cooling | 1 | ls | 106,000.00 | 106,000 | | |
| 2585 | | | | | | | |
| 2586 | <u>Temporary Phasing Work; Plumbing</u> | | | | | | |
| 2587 | Phase 2: temp server/café/warming; new pot sink and hand sinks | 1 | ls | 18,000.00 | 18,000 | | |
| 2588 | Phase 2: temp library and offices misc plumbing mods | 1 | ls | 40,000.00 | 40,000 | | |
| 2589 | Phase 2: Fusco demo plumbing fixtures/piping | 9 | ea | 600.00 | 5,400 | | |
| 2590 | Phase 2: Fusco new plumbing piping and connections | 1 | ls | 8,000.00 | 8,000 | | |
| 2591 | Phase 2: Blue Gym new plumbing fixtures | 3 | ea | 1,250.00 | 3,750 | | |
| 2592 | Phase 2: Blue Gym new plumbing piping and connections | 1 | ls | 9,000.00 | 9,000 | | |
| 2593 | Phase 2: temp drama classroom misc plumbing mods | 1 | ls | 5,000.00 | 5,000 | | |
| 2594 | | | | | | | |
| 2595 | <u>HVAC: Temporary Phasing Work</u> | | | | | | |
| 2596 | Phase 2: temp server/café/warming hvac mods | 1 | ls | 20,000.00 | 20,000 | | |
| 2597 | Phase 2: temp library and offices misc hvac mods | 1 | ls | 15,000.00 | 15,000 | | |
| 2598 | Phase 2: temp (5) classrooms misc hvac mods | 1 | ls | 20,000.00 | 20,000 | | |
| 2599 | Phase 2: temp drama classroom misc hvac mods | 1 | ls | 4,000.00 | 4,000 | | |
| 2600 | Phase 2: 200 HP Rental steam boiler/fuel (18 months) | 1 | ls | 288,000.00 | 288,000 | | |
| 2601 | Phase 2: Rental steam boiler steam/cond/water piping | 1 | ls | 5,000.00 | 5,000 | | |
| 2602 | PH2: ERV-1 200 CFM with enthalpy wheel and fans | 1 | ea | 5,500.00 | 5,500 | | |
| 2603 | PH2: Dx heat pump split system 1 ton | 1 | ea | 6,500.00 | 6,500 | | |
| 2604 | PH2: Dx HP Refrigerant Piping | 1 | ls | 1,000.00 | 1,000 | | |
| 2605 | PH2: Air conditioning unit, window mounted | 2 | ea | 1,400.00 | 2,800 | | |
| 2606 | PH2: Unit heater, electric | 9 | ea | 1,050.00 | 9,450 | | |
| 2607 | PH2: Duct mounted heating coil, electric | 1 | ea | 950.00 | 950 | | |
| 2608 | PH2: Ductwork for ERV | 620 | lbs | 15.00 | 9,300 | | |
| 2609 | PH2: Misc accessories & grilles for ERV | 1 | ls | 800.00 | 800 | | |
| 2610 | PH2: AHU preventive maintenance (belts, clean coil) & TAB | 4 | ea | 3,000.00 | 12,000 | | |
| 2611 | PH2: Demolition | 1 | ls | 10,000.00 | 10,000 | | |
| 2612 | | | | | | | |
| 2613 | <u>Fire Protection: Temporary Phasing Work</u> | | | | | | |
| 2614 | PH2 Swing space Fusco subdivide drama classes | 1 | ls | 5,000.00 | 5,000 | | |
| 2615 | PH2 Swing space Fusco subdivide drama/connect to PH1 bldg | 1 | ls | 5,000.00 | 5,000 | | |
| 2616 | PH2 Swing space temp Kitchen/Cafeteria mods | 1 | ls | 15,000.00 | 15,000 | | |
| 2617 | PH2 Swing space temp Library modifications | 1 | ls | 15,000.00 | 15,000 | | |
| 2618 | PH2 Swing space temp Classroom modifications | 1 | ls | 10,000.00 | 10,000 | | |
| 2619 | | | | | | | |
| 2620 | <u>Electrical: Temporary Phasing Work</u> | | | | | | |
| 2621 | Temporary Phasing and relocation work per drawings | 1 | ls | 100,000.00 | 100,000 | | |
| 2622 | | | | | | | |
| 2623 | Phase 3 | | | | | | |
| 2624 | <u>1st Floor</u> | | | | | | |
| 2625 | Temp PE Offices | 1,762 | gfa | 10.00 | with EBP | | |
| 2626 | Temp Admin (Blue Area balance is in EBP). Scope here is one room | 193 | gfa | 10.00 | 1,930 | | |
| 2627 | <u>Temp walls</u> | | | | | | |
| 2628 | Temporary Exterior wall (Orange) @ existing opening | 75 | sf | 28.00 | 2,100 | | |
| 2629 | Temporary exterior wall; maintenance | 75 | sf | 1.50 | 113 | | |
| 2630 | Temporary exterior wall; demolition | 75 | sf | 2.00 | 150 | | |
| 2631 | Infill allowance | 75 | sf | 10.00 | 750 | | |
| 2632 | Exterior Door | 1 | ea | 4,000.00 | 4,000 | | |
| 2633 | Temporary Exterior wall (Red) @new building 12 ' high | 2,460 | sf | 28.00 | 68,880 | | |
| 2634 | Temporary exterior wall; maintenance | 2,460 | sf | 1.50 | 3,690 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------------------|--|-------|------|--------------|---------------|--------------|---------------|
| NEW CONSTRUCTION | | | | | | | |
| 2635 | Temporary exterior wall; demolition | 2,460 | sf | 2.00 | 4,920 | | |
| 2636 | <u>2nd floor</u> | | | | | | |
| 2637 | Temp Classrooms | 1,811 | gfa | 25.00 | 45,275 | | |
| 2638 | <u>Temp walls</u> | | | | | | |
| 2639 | Temporary Exterior wall (Orange) @ existing opening some scope in Phase 2 | 75 | sf | 28.00 | 2,100 | | |
| 2640 | Temporary exterior wall; maintenance | 75 | sf | 1.50 | 113 | | |
| 2641 | Temporary exterior wall; demolition | 75 | sf | 2.00 | 150 | | |
| 2642 | Infill allowance | 75 | sf | 10.00 | 750 | | |
| 2643 | Temporary Exterior wall (Red) @new building 12 ' high | 2,232 | sf | 28.00 | 62,496 | | |
| 2644 | Temporary exterior wall; maintenance | 2,232 | sf | 1.50 | 3,348 | | |
| 2645 | Temporary exterior wall; demolition | 2,232 | sf | 2.00 | 4,464 | | |
| 2646 | <u>3rd floor</u> | | | | | | |
| 2647 | <u>Temp walls</u> | | | | | | |
| 2648 | Temporary Exterior wall (Orange) @ existing opening some scope in Phase 2 | 100 | sf | 28.00 | 2,800 | | |
| 2649 | Temporary exterior wall; maintenance | 100 | sf | 1.50 | 150 | | |
| 2650 | Temporary exterior wall; demolition | 100 | sf | 2.00 | 200 | | |
| 2651 | Infill allowance | 100 | sf | 10.00 | 1,000 | | |
| 2652 | Temporary Exterior wall (Red) @new building 16 ' high (some scope in phase 2) | 4,144 | sf | 28.00 | 116,032 | | |
| 2653 | Temporary exterior wall; maintenance | 4,144 | sf | 1.50 | 6,216 | | |
| 2654 | Temporary exterior wall; demolition | 4,144 | sf | 2.00 | 8,288 | | |
| 2655 | <u>4th floor</u> | | | | | | |
| 2656 | <u>Temp walls</u> | | | | | | |
| 2657 | Temporary Exterior wall (Red) @new building 16 ' high- Height unknown | 4,256 | sf | 28.00 | 119,168 | | |
| 2658 | Temporary exterior wall; maintenance | 4,256 | sf | 1.50 | 6,384 | | |
| 2659 | Temporary exterior wall; demolition | 4,256 | sf | 2.00 | 8,512 | | |
| 2660 | | | | | | | |
| 2661 | <u>Locker Rooms</u> | | | | | | |
| 2662 | <u>Athletic locker Rooms</u> | | | | | | |
| 2663 | Demolish existing PE Locker Rooms | 1 | ls | 3,000.00 | 3,000 | | |
| 2664 | New partitions | 300 | sf | 15.00 | 4,500 | | |
| 2665 | New door, frame and hardware | 2 | ea | 1,600.00 | 3,200 | | |
| 2666 | Patch floor to match existing | 1 | ls | 200.00 | 200 | | |
| 2667 | Install salvaged lockers | 84 | ea | 50.00 | 4,200 | | |
| 2668 | <u>PE locker Rooms</u> | | | | | | |
| 2669 | Demolition at existing athletic locker rooms | 1,330 | sf | 15.00 | 19,950 | | |
| 2670 | Salvage lockers | 84 | ea | 50.00 | 4,200 | | |
| 2671 | New partitions | 300 | sf | 15.00 | 4,500 | | |
| 2672 | Patch @ floor drains | 1 | ls | 1,000.00 | 1,000 | | |
| 2673 | New tile flooring | 1,330 | sf | 25.00 | 33,250 | | |
| 2674 | Allow for installing lockers (5 tier) and relocating to new building; 1,315 openings | 263 | ea | 150.00 | 39,450 | | |
| 2675 | | | | | | | |
| 2676 | <u>Temporary Phasing Work: Plumbing</u> | | | | | | |
| 2677 | Phase 3: temp (2) drama classroom misc plumbing mods | 1 | ls | 10,000.00 | 10,000 | | |
| 2678 | Phase 3: Downs PE Locker demo valve/drains/piping | 1 | ls | 4,000.00 | 4,000 | | |
| 2679 | | | | | | | |
| 2680 | <u>HVAC: Temporary Phasing Work</u> | | | | | | |
| 2681 | Phase 3: temp (2) drama classroom misc hvac mods | 1 | ls | 8,000.00 | 8,000 | | |
| 2682 | Phase 3: temp PE offices misc hvac mods | 1 | ls | 10,000.00 | 10,000 | | |
| 2683 | Phase 3: Stage/platform unit heater, electric | 3 | ea | 1,050.00 | 3,150 | | |
| 2684 | Phase 3: Locker room AHU preventive maintenance (belts, clean coil) & TAB | 2 | ea | 3,000.00 | 6,000 | | |
| 2685 | | | | | | | |
| 2686 | <u>Fire Protection: Temporary Phasing Work</u> | | | | | | |
| 2687 | PH3 Swing space temp walkway modify as req'd | 1 | ls | 5,000.00 | 5,000 | | |
| 2688 | PH3 Swing space temp Locker Room modifications | 1 | ls | 5,000.00 | 5,000 | | |
| 2689 | PH3 Swing space subdivide classes for office/conf rooms | 1 | ls | 10,000.00 | 10,000 | | |
| 2690 | PH1 Demolition- Collumb House/Auditorium service | 1 | ls | 3,000.00 | 3,000 | | |
| 2691 | PH2 Demolition- Collumb House/Auditorium | 1 | ls | 40,000.00 | 40,000 | | |
| 2692 | PH3 Demolition- Fusco/Blue Gym | 1 | ls | 10,000.00 | 10,000 | | |
| 2693 | PH4 Demolition- Downs/Red Gym | 1 | ls | 25,000.00 | 25,000 | | |
| 2694 | <u>Electrical: Temporary Phasing Work</u> | | | | | | |
| 2695 | Temporary Phasing and relocation work per drawings | 1 | ls | 50,000.00 | 50,000 | | |
| 2696 | SUBTOTAL PHASE 2 & 3 | | | | | 3,091,215 | |
| 2697 | | | | | | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA 408,590

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

NEW CONSTRUCTION

| | | | | | | | |
|------------------------------|--|--|--|--|--|--|-------------|
| TOTAL - SPECIAL CONSTRUCTION | | | | | | | \$3,256,241 |
|------------------------------|--|--|--|--|--|--|-------------|

| | |
|-----|-------------------------------|
| F20 | SELECTIVE BUILDING DEMOLITION |
|-----|-------------------------------|

F2010 BUILDING ELEMENTS DEMOLITION

See main summary for demolition of existing buildings

SUBTOTAL

\$0

F2020 HAZARDOUS COMPONENTS ABATEMENT

See main summary for HazMat allowance

See Summary

SUBTOTAL

\$0

| | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|-----|
| TOTAL - SELECTIVE BUILDING DEMOLITION | | | | | | | \$0 |
|---------------------------------------|--|--|--|--|--|--|-----|



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

GROSS FLOOR AREA CALCULATION

Toilet Facility

800

TOTAL GROSS FLOOR AREA (GFA)

800 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Grade beam: 2' x 3'

Formwork

720

sf

15.00

10,800

Re-bar

10,800

lbs.

1.50

16,200

Concrete material; 3,000 psi

29

cy

148.00

4,292

Placing concrete

29

cy

120.00

3,480

070001 WATERPROOFING, DAMPPROOFING AND CAULKING

Dampproofing foundation wall and footing

240

sf

3.00

NIC

072100 THERMAL INSULATION

Insulation

240

sf

3.00

NIC

312000 EARTHWORK

Grade beam: 2' x 3'

Excavation

133

cy

25.00

3,325

Store on site

133

cy

12.00

1,596

Backfill with existing material

104

cy

16.00

1,664

SUBTOTAL

41,357

A1020 SPECIAL FOUNDATIONS

Helical piles

28

ea

2,800.00

78,400

Helical piles cut off

28

ea

200.00

5,600

SUBTOTAL

84,000

A1030 LOWEST FLOOR CONSTRUCTION

033000 CONCRETE

Structural slab on grade, 12" thick

800

sf

Formwork

120

sf

12.00

1,440

Rebar

6,800

lbs

1.50

10,200

Concrete - 12" thick

31

cy

148.00

4,588

Placing concrete

31

cy

90.00

2,790

Finishing and curing concrete

800

sf

2.00

1,600

312000 EARTHWORK

Compacted granular fill, 12"

30

cy

45.00

1,350

Compact existing sub-grade

800

sf

0.50

400

SUBTOTAL

22,368

TOTAL - FOUNDATIONS

\$147,725

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No Work in this section

SUBTOTAL

-



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

A2020 BASEMENT WALLS

No Work in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1020 ROOF CONSTRUCTION

Wood framed construction

800

sf

18.00

14,400

SUBTOTAL

14,400

TOTAL - SUPERSTRUCTURE

\$14,400

B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

Exterior Wall Area; Solid

1,920

sf

042000 MASONRY

CMU backup, 8"

1,920

sf

22.00

42,240

Glazed CMU, 4"

1,920

sf

25.00

48,000

Premium for anti-graffiti coating at CMU

1,920

sf

6.00

11,520

Scaffolding

1,920

sf

4.00

included

055000 MISC. METALS

Miscellaneous metals to exterior masonry; lintels, angles etc.

1,920

sf

1.50

2,880

070001 WATERPROOFING, DAMPPROOFING AND CAULKING

Air barrier

1,920

sf

7.00

13,440

Miscellaneous sealants to closure

1,920

sf

1.00

1,920

072100 THERMAL INSULATION

3" insulation

1,920

sf

3.00

5,760

101400 SIGNAGE

Stainless steel sign letters on standoffs

4' high

9

ea

750.00

6,750

3' high

10

ea

500.00

5,000

SUBTOTAL

137,510

B2020 WINDOWS

No work required

SUBTOTAL

-

B2030 EXTERIOR DOORS

079200 JOINT SEALANTS

Backer rod & double sealant

28

lf

9.00

252

083513 OVERHEAD DOORS

Overhead door

80

sf

65.00

5,200

SUBTOTAL

5,452



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

| | | | | | | | |
|---------------------------------|--|--|--|--|--|--|------------------|
| TOTAL - EXTERIOR CLOSURE | | | | | | | \$142,962 |
|---------------------------------|--|--|--|--|--|--|------------------|

B30 ROOFING

B3010 ROOF COVERINGS

| | | | | | | | |
|--------|---|-----|----|-------|-------|--------|--|
| 061000 | ROUGH CARPENTRY | | | | | | |
| | Wood blocking at roof edge | 120 | lf | 20.00 | 2,400 | | |
| 070001 | WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | | |
| | AVB at roof perimeter | 120 | lf | 8.00 | 960 | | |
| 070002 | ROOFING AND FLASHING | | | | | | |
| | PVC roofing | 800 | sf | 9.00 | 7,200 | | |
| | Cover board | 800 | sf | 2.00 | NR | | |
| | Insulation; including tapered at select areas | 800 | sf | 3.00 | 2,400 | | |
| | Substrate board | 800 | sf | 1.50 | NR | | |
| | Reinforced vapor barrier | 800 | sf | 1.00 | NR | | |
| | <u>Miscellaneous Roofing</u> | | | | | | |
| | Roof edge | 120 | lf | 30.00 | 3,600 | | |
| | SUBTOTAL | | | | | 16,560 | |

| | | | | | | | |
|------------------------|--|--|--|--|--|--|-----------------|
| TOTAL - ROOFING | | | | | | | \$16,560 |
|------------------------|--|--|--|--|--|--|-----------------|

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

| | | | | | | | |
|--------|----------|-------|----|-------|--------|--------|--|
| 042000 | MASONRY | | | | | | |
| | 4" CMU | 42 | sf | 22.00 | 924 | | |
| | 6" CMU | 770 | sf | 22.00 | 16,940 | | |
| | 8" CMU | 1,190 | sf | 24.00 | 28,560 | | |
| | SUBTOTAL | | | | | 46,424 | |

C1020 INTERIOR DOORS

| | | | | | | | |
|--------|--|----|----|----------|-------|-------|--|
| 061000 | ROUGH CARPENTRY | | | | | | |
| | Wood blocking at openings | 80 | lf | 4.00 | 320 | | |
| 070001 | WATERPROOFING, DAMPPROOFING AND CAULKING | | | | | | |
| | Backer rod & double sealant | 80 | lf | 2.50 | 200 | | |
| 081110 | HOLLOW METAL DOOR FRAMES | | | | | | |
| | Door, frame and hardware | | | | | | |
| | Single | 4 | ea | 1,800.00 | 7,200 | | |
| 090007 | PAINTING | | | | | | |
| | Finish doors and frames | 4 | ea | 200.00 | 800 | | |
| | SUBTOTAL | | | | | 8,520 | |

C1030 SPECIALTIES / MILLWORK

| | | | | | | | |
|--------|---------------------|---|----|----------|-------|--|--|
| 102110 | TOILET COMPARTMENTS | | | | | | |
| | ADA | 2 | ea | 1,800.00 | 3,600 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

| | | | | | | | |
|-----|-----------------------------|---|-----|----------|-------|--------|--|
| 173 | Standard | 4 | ea | 1,600.00 | 6,400 | | |
| 174 | Urinal screen | 1 | ea | 650.00 | 650 | | |
| 175 | | | | | | | |
| 176 | 102800 TOILET ACCESSORIES | | | | | | |
| 177 | Gang bathroom | 2 | rms | 2,350.00 | 4,700 | | |
| 178 | Single bathroom | 1 | rms | 800.00 | 800 | | |
| 179 | Janitors closet accessories | 1 | rms | 300.00 | 300 | | |
| 180 | Electric hand dryers | 3 | ea | 750.00 | 2,250 | | |
| 181 | Sanitary napkin disposal | 4 | ea | 85.00 | 340 | | |
| 182 | Fire extinguisher cabinets | 2 | ea | 350.00 | 700 | | |
| 183 | SUBTOTAL | | | | | 19,740 | |

TOTAL - INTERIOR CONSTRUCTION

\$74,684

C30 INTERIOR FINISHES

C3010 WALL FINISHES

090007 PAINTING

| | | | | | | | |
|-----|--------------|-------|----|------|-------|-------|--|
| 194 | Paint to CMU | 5,112 | sf | 1.25 | 6,390 | | |
| 195 | SUBTOTAL | | | | | 6,390 | |

C3020 FLOOR FINISHES

033000 CONCRETE

| | | | | | | | |
|-----|------------------------|-----|----|------|-------|-------|--|
| 200 | Sealed concrete; EXP-C | 565 | sf | 2.00 | 1,130 | | |
| 201 | SUBTOTAL | | | | | 1,130 | |

C3030 CEILING FINISHES

090007 PAINTING

| | | | | | | | |
|-----|-----------------------|-----|----|------|-----|--|--|
| 206 | Paint to GWB ceilings | 565 | sf | 1.00 | 565 | | |
|-----|-----------------------|-----|----|------|-----|--|--|

092900 GYPSUM BOARD ASSEMBLIES

| | | | | | | | |
|-----|-------------|-----|----|-------|-------|-------|--|
| 209 | GWB ceiling | 565 | sf | 15.00 | 8,475 | | |
| 210 | SUBTOTAL | | | | | 9,040 | |

TOTAL - INTERIOR FINISHES

\$16,560

D20 PLUMBING

D20 PLUMBING, GENERALLY

Equipment

| | | | | | | | |
|-----|---------------------------------------|---|----|----------|-------|--|--|
| 219 | Electric water heater | 1 | ea | 3,500.00 | 3,500 | | |
| 220 | Hot water circulator pump assembly | 1 | ea | 800.00 | 800 | | |
| 221 | Water mixing valve station | 1 | ea | 1,700.00 | 1,700 | | |
| 222 | Water meter assembly | 1 | ea | 1,100.00 | 1,100 | | |
| 223 | 3" Reduce pressure backflow preventer | 1 | ea | 2,900.00 | 2,900 | | |
| 224 | Floor drain | 4 | ea | 675.00 | 2,700 | | |
| 225 | Hose bibb | 2 | ea | 225.00 | 450 | | |
| 226 | Freezeproof wall hydrant | 1 | ea | 325.00 | 325 | | |

Plumbing Fixtures

| | | | | | | | |
|-----|------------------|---|----|----------|-------|--|--|
| 228 | Water closet | 4 | ea | 1,525.00 | 6,100 | | |
| 229 | Water closet ADA | 3 | ea | 1,550.00 | 4,650 | | |
| 230 | Urinal | 1 | ea | 1,575.00 | 1,575 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

| | | | | | | | |
|-----|--|-----|----|----------|--------|--------|-----------------|
| 231 | Urinal ADA | 1 | ea | 1,600.00 | 1,600 | | |
| 232 | Lavatory ADA wall hung | 5 | ea | 1,400.00 | 7,000 | | |
| 233 | Mop sink | 1 | ea | 1,150.00 | 1,150 | | |
| 234 | Drinking fountain, single level | 2 | ea | 2,550.00 | 5,100 | | |
| 235 | <u>Domestic Water Piping</u> | | | | | | |
| 236 | Copper pipe type L with fittings & hangers | 335 | lf | 45.00 | 15,075 | | |
| 237 | Valves & accessories | 1 | ls | 2,261.25 | 2,261 | | |
| 238 | <u>Pipe insulation</u> | | | | | | |
| 239 | Pipe insulation | 335 | lf | 10.00 | 3,350 | | |
| 240 | <u>Sanitary W&V UG, SV Cast Iron Pipe (hung from slab)</u> | | | | | | |
| 241 | SV Cast iron pipe with fittings | 180 | lf | 45.00 | 8,100 | | |
| 242 | <u>Sanitary W&V AG, Hubless Cast Iron Pipe</u> | | | | | | |
| 243 | Cast iron pipe with fittings & hangers | 260 | lf | 45.00 | 11,700 | | |
| 244 | <u>UG Domestic Water Piping from Main Bldg</u> | | | | | | |
| 245 | Ductile iron pipe with fittings | 250 | lf | 44.00 | 11,000 | | |
| 246 | <u>UG Sanitary from Main Building</u> | | | | | | |
| 247 | SV Cast iron pipe with fittings | 250 | lf | 31.00 | 7,750 | | |
| 248 | SUBTOTAL | | | | | 99,886 | |
| 249 | TOTAL - PLUMBING | | | | | | \$99,886 |

D30 HVAC

D30 HVAC, GENERALLY

| | | | | | | | |
|-----|---|---|----|----------|--------|--------|-----------------|
| 256 | <u>HVAC Equipment</u> | | | | | | |
| 257 | Electric wall unit heater, 3 KW | 5 | ea | 900.00 | 4,500 | | |
| 258 | <u>Air distribution</u> | | | | | | |
| 259 | Exhaust fan 800 CFM | 2 | ea | 2,000.00 | 4,000 | | |
| 260 | <u>Sheet metal & Accessories</u> | | | | | | |
| 261 | Sheet metal & accessories, louvers, GRD's | 1 | ls | 9,500.00 | 9,500 | | |
| 262 | <u>Automatic Temperature Controls</u> | | | | | | |
| 263 | Temperature sensor | 7 | ea | 2,000.00 | 14,000 | | |
| 264 | <u>Balancing</u> | | | | | | |
| 265 | System testing & balancing | 1 | ls | 1,500.00 | 1,500 | | |
| 266 | SUBTOTAL | | | | | 33,500 | |
| 268 | TOTAL - HVAC | | | | | | \$33,500 |

D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

| | | | | | | | |
|-----|--------------------------------|--|--|--|--|---|--|
| 273 | No work in this section | | | | | | |
| 275 | SUBTOTAL | | | | | - | |
| 277 | TOTAL - FIRE PROTECTION | | | | | | |

D50 ELECTRICAL

SERVICE & DISTRIBUTION

Gear & Distribution

| | | | | | | | |
|-----|---------------------|---|----|----------|-------|--|--|
| 284 | <u>Normal Power</u> | | | | | | |
| 285 | 75KVA transformer | 1 | ea | 9,900.00 | 9,900 | | |



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

| | | | | | | | |
|-----|-------------------------------------|----|----|----------|-------|--------|--|
| 286 | 225A 120/208V panelboard | 1 | ea | 2,200.00 | 2,200 | | |
| 287 | 225A feed | 20 | lf | 43.60 | 872 | | |
| 288 | <u>Equipment Wiring</u> | | | | | | |
| 289 | EF 20A feed and connection | 2 | ea | 940.00 | 1,880 | | |
| 290 | EUH 20A feed, connection & 30 NFSS | 5 | ea | 880.00 | 4,400 | | |
| 291 | EWH 60A feed, connection & 60A NFSS | 1 | ea | 1,085.00 | 1,085 | | |
| 292 | Hand dryer feed and connection | 3 | ea | 450.00 | 1,350 | | |
| 293 | SUBTOTAL | | | | | 21,687 | |

Lighting & Branch Power

| | | | | | | | |
|-----|--------------------------------------|-----|----|--------|-------|--------|--|
| 296 | <u>Lighting</u> | | | | | | |
| 297 | SCo4 | 11 | ea | 179.00 | 1,969 | | |
| 298 | EBU | 4 | ea | 344.00 | 1,376 | | |
| 299 | EXIT, allow | 1 | ea | 344.00 | 344 | | |
| 300 | <u>Lighting control</u> | | | | | | |
| 301 | Occupancy sensor | 5 | ea | 180.00 | 900 | | |
| 302 | Single pole switch LV | 3 | ea | 28.50 | 86 | | |
| 303 | <u>Branch devices</u> | | | | | | |
| 304 | GFI receptacle | 11 | ea | 36.00 | 396 | | |
| 305 | Connection to EWC | 1 | ea | 85.00 | 85 | | |
| 306 | Connection to fire alarm panel | 2 | ea | 100.00 | 200 | | |
| 307 | <u>Lighting and branch circuitry</u> | | | | | | |
| 308 | Device plate WP | 7 | ea | 20.00 | 140 | | |
| 309 | Device plate | 7 | ea | 5.00 | 35 | | |
| 310 | Device box | 37 | ea | 29.40 | 1,088 | | |
| 311 | Circuitry | 900 | lf | 9.00 | 8,100 | | |
| 312 | SUBTOTAL | | | | | 14,719 | |

D5030 COMMUNICATION & SECURITY SYSTEMS

| | | | | | | | |
|-----|--|-------|----|-----------|--------|--------|--|
| 315 | <u>Telecommunications</u> | | | | | | |
| 316 | MDF/IDF fit out closets, devices and cabling | 1 | ls | 2,000.00 | 2,000 | | |
| 317 | Devices and cabling, not shown at this scope level | 1,630 | sf | 1.00 | 1,630 | | |
| 318 | <u>Fire Alarm</u> | | | | | | |
| 319 | Fire alarm terminal cabinet | 1 | ls | 5,000.00 | 5,000 | | |
| 320 | Knox box, allow | 1 | ea | 600.00 | 600 | | |
| 321 | Radio Master box | | | | NIC | | |
| 322 | BP | 1 | ea | 500.00 | 500 | | |
| 323 | Beacon | 2 | ea | 281.00 | 562 | | |
| 324 | Manual pull station | 1 | ea | 107.00 | 107 | | |
| 325 | Manual pull station WP | 1 | ea | 117.00 | 117 | | |
| 326 | Smoke detector | 1 | ea | 148.00 | 148 | | |
| 327 | Heat detector | 4 | ea | 148.00 | 592 | | |
| 328 | Audio visual device | 2 | ea | 151.00 | 302 | | |
| 329 | Visual device | 1 | ea | 130.00 | 130 | | |
| 330 | Remote alarm indicator WP | 1 | ea | 213.00 | 213 | | |
| 331 | Control/monitor module | 2 | ea | 235.00 | 470 | | |
| 332 | Device box | 17 | ea | 29.40 | 500 | | |
| 333 | Circuitry | 400 | lf | 9.00 | 3,600 | | |
| 334 | Programming and testing | 1 | ls | 1,300.00 | 1,300 | | |
| 335 | <u>Security System</u> | | | | - | | |
| 336 | Security System, allow | 1 | ls | 10,000.00 | 10,000 | | |
| 337 | SUBTOTAL | | | | | 27,771 | |

D5040 OTHER ELECTRICAL SYSTEMS



Arlington High School
Arlington, MA

17-Aug-20

90% Construction Document Estimate

GFA

800

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

Stadium Toilet Facility Outbuilding

| | | | | | | | |
|-----|---|-----|----|----------|--------|--------|-------------------------------------|
| 340 | <u>Miscellaneous</u> | | | | | | |
| 341 | Grounding & bonding | 1 | ls | 3,500.00 | 3,500 | | |
| 342 | Temp power and lights | 1 | ls | 1,000.00 | 1,000 | | |
| 343 | Coordination, BIM | 1 | ls | 4,000.00 | 4,000 | | |
| 344 | Permits and fees | 1 | ls | 3,200.00 | Waived | | |
| 345 | SUBTOTAL | | | | | 8,500 | |
| 346 | | | | | | | |
| 347 | G40 ELECTRICAL UTILITIES | | | | | | |
| 348 | <u>Civil</u> | | | | | | |
| 349 | Concrete: | | | | | | |
| 350 | Secondary DB | 400 | lf | 25.00 | 10,000 | | |
| 351 | LV DB | 400 | lf | 28.00 | 11,200 | | |
| 352 | Excavation and backfill: | | | | | | |
| 353 | Secondary DB | 400 | lf | 30.00 | 12,000 | | |
| 354 | LV DB | 400 | lf | 25.00 | 10,000 | | |
| 355 | SUBTOTAL | | | | | 43,200 | |
| 356 | | | | | | | |
| 357 | <u>Power</u> | | | | | | |
| 358 | 250A feed secondary ductbank from School Building, allow length per E9.0 note 3 | 400 | lf | 59.00 | 23,600 | | |
| 359 | <u>Communication</u> | | | | | | |
| 360 | 1-4" PVC conduit | 400 | lf | 9.00 | 3,600 | | |
| 361 | SUBTOTAL | | | | | 27,200 | |
| 362 | | | | | | | |
| 363 | TOTAL - ELECTRICAL | | | | | | \$143,077 |
| 364 | | | | | | | |
| 365 | E10 EQUIPMENT | | | | | | |
| 366 | | | | | | | |
| 367 | | | | | | | |
| 368 | E10 EQUIPMENT, GENERALLY | | | | | | |
| 369 | No work in this section | | | | | | |
| 370 | SUBTOTAL | | | | | - | |
| 371 | | | | | | | |
| 372 | TOTAL - EQUIPMENT | | | | | | |
| 373 | | | | | | | |
| 374 | SUBTOTAL TOILET BUILDING | | | | | | \$689,354 \$861.69 |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

| | | | | | | |
|---|---------|------|------------|----------|--|---------|
| Mobilization | 1 | ls | 205,000.00 | 205,000 | | |
| Mobilization | 1 | ls | 70,000.00 | w/ EBP#2 | | |
| Site GR's - police details survey | 1 | ls | 225,000.00 | 225,000 | | |
| Site GR's | 1 | ls | 75,000.00 | w/ EBP#2 | | |
| Site construction fence gates | 2 | loc | 15,000.00 | w/ EBP#2 | | |
| Stabilized construction entrance/ set-down area including maintenance during construction | 2,100 | sf | 6.00 | w/ EBP#2 | | |
| Street sweeping | 1 | ls | 90,000.00 | 90,000 | | |
| Street sweeping - per leveling sheet | 1 | ls | 90,000.00 | w/ EBP#2 | | |
| Temporary signage | 1 | ls | 40,000.00 | 40,000 | | |
| SUBTOTAL | | | | | | 560,000 |
| Demolish existing paving - add in schouler | 124,144 | sf | 1.25 | 155,180 | | |
| Demolish existing paving | 56,105 | sf | 1.25 | w/ EBP#2 | | |
| Demolish existing courtyards | 31,400 | sf | 1.50 | 47,100 | | |
| Demolish existing concrete pavers | 2,895 | sf | 1.50 | w/ EBP#2 | | |
| Demolish existing playground | 2,382 | sf | 1.50 | w/ EBP#2 | | |
| Demolish existing shot put landing area | 3,268 | sf | 1.50 | 4,902 | | |
| Demolish existing fencing | 1,660 | lf | 5.00 | 8,300 | | |
| Demolish existing fencing | 220 | lf | 5.00 | w/ EBP#2 | | |
| Demolish existing backstops | 130 | lf | 12.00 | 1,560 | | |
| Demolish existing walls | 610 | lf | 95.00 | 57,950 | | |
| Demolish existing walls | 290 | lf | 95.00 | w/ EBP#2 | | |
| Demolish existing trees | 6 | ea | 400.00 | 2,400 | | |
| Demolish existing trees | 77 | ea | 400.00 | w/ EBP#2 | | |
| Clear existing vegetation/invasive species | 1 | acre | 5,000.00 | 5,000 | | |
| Demolish existing guardrails | 343 | lf | 150.00 | 51,450 | | |
| Demolish existing guardrails | 45 | lf | 150.00 | w/ EBP#2 | | |
| Demolish existing signs | 10 | ea | 150.00 | w/ EBP#2 | | |
| Demolish existing playground fence | 143 | lf | 15.00 | w/ EBP#2 | | |
| Remove and stockpile existing storage at baseball | 3 | ea | 500.00 | 1,500 | | |
| Remove and stockpile existing softball benches | 4 | ea | 500.00 | 2,000 | | |
| Remove and stockpile existing shed at fields | 1 | ea | 1,200.00 | 1,200 | | |
| Remove and stockpile existing planter boxes | 3 | ea | 350.00 | 1,050 | | |
| Demolish existing bleacher - visitor | 3,600 | sf | 2.00 | 7,200 | | |
| Demolish existing bleacher foundations - visitor | 16 | ea | 1,000.00 | 16,000 | | |
| Demolish existing bleacher steel beams - visitor | 2 | ea | 1,500.00 | 3,000 | | |
| Demolish existing monitoring well | 1 | ls | 5,000.00 | w/ EBP#2 | | |
| Demolish existing hydrant | 2 | ea | 1,000.00 | w/ EBP#2 | | |
| Remove and stockpile existing hydrants | 1 | ea | 1,000.00 | 1,000 | | |
| Cut/cap water lines | 3 | ea | 10,000.00 | w/ EBP#2 | | |
| Cut/cap gas lines | 3 | ea | 10,000.00 | w/ EBP#2 | | |
| Demolish existing water gate | 1 | loc | 500.00 | w/ EBP#2 | | |
| Demolish existing water lines | 232 | lf | 20.00 | 4,640 | | |
| Demolish existing water lines | 1,360 | lf | 15.00 | w/ EBP#2 | | |
| Demolish existing drainage lines | 2,131 | lf | 20.00 | 42,620 | | |
| Demolish existing drainage lines | 900 | lf | 15.00 | w/ EBP#2 | | |
| Demolish existing drainage utility structures | 25 | ea | 250.00 | 6,250 | | |
| Demolish existing drainage utility structures | 13 | ea | 250.00 | w/ EBP#2 | | |
| Demolish existing utility pads | 3 | ea | 250.00 | w/ EBP#2 | | |
| Demolish existing sewer lines | 350 | lf | 15.00 | w/ EBP#2 | | |
| Demolish existing gas lines | 351 | lf | 10.00 | w/ EBP#2 | | |
| Demolish existing duct bank | 165 | lf | 10.00 | w/ EBP#2 | | |
| SUBTOTAL | | | | | | 420,302 |

Site Earthwork

| | | | | | | |
|--|---------|----|-------|----------|--|--|
| Preconstruction survey | | | | NIC | | |
| Remove and dispose lawn | 233,000 | sf | 0.10 | 23,300 | | |
| Remove and dispose lawn | 170,000 | sf | 0.10 | w/ EBP#2 | | |
| Strip & Stockpile topsoil- phase 1 for reuse | 3,300 | cy | 12.00 | w/ EBP#2 | | |
| Strip & Stockpile topsoil - softball field area already complete | 3,180 | cy | 12.00 | w/ EBP#2 | | |
| Strip topsoil for export - phase 2-4 | 4,970 | cy | 6.00 | 29,820 | | |
| Load topsoil for export - phase 2-4 | 4,970 | cy | 2.50 | 12,425 | | |
| Disposal of topsoil to match less then RCS-1 | 7,952 | tn | 20.00 | 159,040 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-----------------|---|--------|------|--------------|---------------|--------------|---------------|
| SITEWORK | | | | | | | |
| 69 | Load topsoil for export (softball topsoil) - allowance per geotech | 3,180 | cy | 2.50 | 7,950 | | |
| 70 | Disposal of topsoil to match less then RCS-1 | 5,088 | tn | 20.00 | 101,760 | | |
| 71 | <u>Phase One</u> | | | | | | |
| 72 | Cut | 613 | cy | 10.00 | w/ EBP#2 | | |
| 73 | Store on site for reuse | 613 | cy | 14.00 | w/ EBP#2 | | |
| 74 | Fill- reuse existing | 613 | cy | 16.00 | w/ EBP#2 | | |
| 75 | Fill- common fill import (swell 25%) | 4,484 | cy | 35.00 | w/ EBP#2 | | |
| 76 | <u>Phase Two</u> | | | | | | |
| 77 | Cut | 2,600 | cy | 12.00 | 31,200 | | |
| 78 | Store on site for reuse | 2,600 | cy | 14.00 | 36,400 | | |
| 79 | Fill- reuse existing | 2,600 | cy | 16.00 | 41,600 | | |
| 80 | Fill- common fill import (swell 25%) | 15,875 | cy | 35.00 | 555,625 | | |
| 81 | <u>Phase Three</u> | | | | | | |
| 82 | Cut | 700 | cy | 12.00 | 8,400 | | |
| 83 | Store on site for reuse | 700 | cy | 14.00 | 9,800 | | |
| 84 | Fill- reuse existing | 700 | cy | 16.00 | 11,200 | | |
| 85 | Fill- common fill import (swell 25%) | 6,125 | cy | 35.00 | 214,375 | | |
| 86 | <u>Phase Four</u> | | | | | | |
| 87 | Cut | 900 | cy | 12.00 | 10,800 | | |
| 88 | Store on site for reuse | 900 | cy | 14.00 | 12,600 | | |
| 89 | Fill- reuse existing | 900 | cy | 16.00 | 14,400 | | |
| 90 | Fill- common fill import (swell 25%) | 21,375 | cy | 35.00 | 748,125 | | |
| 91 | Import fill to replace exported contaminated soil (swell 25%) | 5,813 | cy | 35.00 | 203,455 | | |
| 92 | Support for SOE - equipment and crew | 45 | dy | 2,500.00 | w/ EBP#2 | | |
| 93 | | | | | | | |
| 94 | Fine grading | 59,250 | sy | 1.50 | 88,875 | | |
| 95 | SUBTOTAL | | | | | 2,321,150 | |
| 96 | | | | | | | |
| 97 | <u>Erosion Control</u> | | | | | | |
| 98 | Silt fence | 10,950 | lf | 10.00 | 109,500 | | |
| 99 | Silt fence- EBP#2 | 1,200 | lf | 10.00 | w/ EBP#2 | | |
| 100 | Silt fence maintenance and monitoring - clean settling basins C1.04 | 1 | ls | 50,000.00 | 50,000 | | |
| 101 | Tree protection | 700 | lf | 6.00 | 4,200 | | |
| 102 | Tree protection- EBP#2 | 1,054 | lf | 6.00 | w/ EBP#2 | | |
| 103 | Inlet protection | 26 | ea | 250.00 | 6,500 | | |
| 104 | Inlet protection- EBP#2 | 9 | ea | 250.00 | w/ EBP#2 | | |
| 105 | | | | | | | |
| 106 | Slope protection - 13,000sf | 1 | ls | 65,000.00 | 65,000 | | |
| 107 | Slope protection- EBP#2 | 1 | ls | 25,000.00 | w/ EBP#2 | | |
| 108 | Repair to neighboring properties | 1 | ls | 25,000.00 | w/ EBP#2 | | |
| 109 | | | | | | | |
| 110 | <u>Support of Geothermal Wells</u> | | | | | | |
| 111 | Support of geothermal wells operations | 1 | ls | 400,000.00 | NIC | | |
| 112 | Settlement tank | 1 | ls | 492,000.00 | NIC | | |
| 113 | Water treatment | 330 | ea | 3,000.00 | NIC | | |
| 114 | SUBTOTAL | | | | | 235,200 | |
| 115 | | | | | | | |
| 116 | Hazardous Waste Remediation | | | | | | |
| 117 | Contaminated soils associated with transformer | | | | See Building | | |
| 118 | Contaminated soils associated with utilities and sitework | | | | See Building | | |
| 119 | Clean corridor for utilities; allowance from DD | 1 | ls | 100,000.00 | 100,000 | | |
| 120 | Treatment of water | 1 | ls | 100,000.00 | 100,000 | | |
| 121 | Allowance to rework existing engineered barrier | 1 | ls | 200,000.00 | 200,000 | | |
| 122 | Allowance for small repairs to engineered barrier | 5 | loc | 20,000.00 | 100,000 | | |
| 123 | Remove transformer vault tank | 1 | ea | 50,000.00 | 50,000 | | |
| 124 | Remove UST 1 (#2 stays in place) | 1 | ea | 15,000.00 | 15,000 | | |
| 125 | SUBTOTAL | | | | | 565,000 | |
| 126 | | | | | | | |
| 127 | G20 SITE IMPROVEMENTS | | | | | | |
| 128 | Roadways | | | | | | |
| 129 | <u>Asphalt Paving; parking lot and roadway</u> | 80,598 | sf | | | | |
| 130 | gravel base; 12" thick (swell 25%) | 3,731 | cy | 40.00 | 149,240 | | |
| 131 | asphalt top; 1.5" thick (Phase 1 work) | 3,889 | sy | 18.00 | 70,002 | | |
| 132 | asphalt top; 1.5" thick | 8,955 | sy | 18.00 | 161,190 | | |
| 133 | asphalt binder; 2.5" thick | 8,955 | sy | 13.00 | 116,415 | | |
| 134 | asphalt binder; 2.5" thick - EBP#2 leveling sheet | 3,889 | sy | 13.00 | w/ EBP#2 | | |
| 135 | gravel base; 12" thick - EBP#2 leveling sheet | 11,667 | cy | 40.00 | w/ EBP#2 | | |
| 136 | Granite curbs | 5,800 | lf | 46.00 | 266,800 | | |
| 137 | Granite curbs - west side of schooler street (allowance) | 120 | lf | 46.00 | 5,520 | | |
| 138 | Granite curbs - landscape | 120 | lf | 65.00 | 7,800 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-----------------|---|--------|-------|--------------|---------------|--------------|---------------|
| SITEWORK | | | | | | | |
| 139 | Granite curbs repair along mass ave. for utility work | 223 | lf | 46.00 | 10,258 | | |
| 140 | Crosswalk hatching | 5 | ea | 1,200.00 | 6,000 | | |
| 141 | Other road markings | 1 | ls | 5,000.00 | 5,000 | | |
| 142 | Parking ADA spaces | 8 | space | 85.00 | 680 | | |
| 143 | Parking spaces | 204 | space | 40.00 | 8,160 | | |
| 144 | Parallel parking spaces | 24 | space | 40.00 | 960 | | |
| 145 | ADA panels | 335 | sf | 18.00 | 6,030 | | |
| 146 | HC curb cuts | 6 | loc | 1,500.00 | 9,000 | | |
| 147 | SUBTOTAL | | | | | 823,055 | |
| 148 | | | | | | | |
| 149 | <u>Pedestrian Paving</u> | | | | | | |
| 150 | <u>Concrete paving</u> | 38,370 | sf | | | | |
| 151 | gravel base; 8" thick | 1,146 | cy | 40.00 | 45,840 | | |
| 152 | 4" concrete paving | 38,370 | sf | 12.00 | 460,440 | | |
| 153 | Premium for ramps | 700 | sf | 20.00 | 14,000 | | |
| 154 | 6" concrete pads | 1,030 | sf | 14.00 | 14,420 | | |
| 155 | 6" vehicular concrete paving | 5,161 | sf | 14.00 | 72,254 | | |
| 156 | 6" vehicular concrete paving- loading dock | 2,636 | sf | 14.00 | 36,904 | | |
| 157 | <u>Asphalt paving</u> | 12,291 | sf | | | | |
| 158 | gravel base; 8" thick | 305 | cy | 40.00 | 12,200 | | |
| 159 | asphalt; 3.5" thick | 1,366 | sy | 35.00 | 47,810 | | |
| 160 | <u>Asphalt paving - Vehicular Depth</u> | 12,859 | sf | | | | |
| 161 | gravel base; 12" thick | 476 | cy | 40.00 | 19,040 | | |
| 162 | asphalt; 4" thick | 1,429 | sy | 35.00 | 50,015 | | |
| 163 | <u>Booster Pavers</u> | 808 | sf | | | | |
| 164 | gravel base; 8" thick | 20 | cy | 40.00 | 800 | | |
| 165 | concrete base; 4" thick | 808 | sf | 12.00 | 9,696 | | |
| 166 | Booster Pavers | 808 | sf | 25.00 | 20,200 | | |
| 167 | <u>Raised concrete speed table</u> | 1,948 | sf | | - | | |
| 168 | gravel base; 12" thick | 72 | cy | 40.00 | 2,880 | | |
| 169 | concrete paving; 6" thick | 1,948 | sf | 12.00 | 23,376 | | |
| 170 | <u>Plaza at baseball field</u> | 3,793 | sf | | - | | |
| 171 | gravel base; 8" thick | 117 | cy | 40.00 | 4,680 | | |
| 172 | 6" concrete paving | 3,793 | sf | 14.00 | 53,102 | | |
| 173 | <u>Rumble strip concrete</u> | 807 | sf | | - | | |
| 174 | gravel base; 8" thick | 20 | cy | 40.00 | 800 | | |
| 175 | concrete paving; 6" thick | 807 | sf | 15.00 | 12,105 | | |
| 176 | <u>Grass pavers</u> | 120 | sf | | | | |
| 177 | gravel base; 4" thick | 1 | cy | 40.00 | 40 | | |
| 178 | grass pavers | 120 | sf | 25.00 | 3,000 | | |
| 179 | <u>Gravel surfacing at generator</u> | 700 | sf | | | | |
| 180 | gravel base; 6" thick - assumed | 13 | cy | 40.00 | 520 | | |
| 181 | SUBTOTAL | | | | | 904,122 | |
| 182 | | | | | | | |
| 183 | <u>Amphitheater - artificial turf detail</u> | | | | | | |
| 184 | Artificial turf surfacing | 3,800 | sf | | | | |
| 185 | Artificial turf surfacing - 1.5" fiber ht. w_envirofill | 3,800 | sf | 12.00 | 45,600 | | |
| 186 | Resilient underlayment (23 mm) | 3,800 | sf | 1.95 | 7,410 | | |
| 187 | Field Liner (impermeable) equal to durascrib | 3,800 | sf | 2.00 | 7,600 | | |
| 188 | Turf anchor- PT wood | 1,040 | lf | 16.00 | 16,640 | | |
| 189 | Precast concrete edger/Seat wall - L6.2 1' x 1.5' set in concrete | 400 | lf | 150.00 | 60,000 | | |
| 190 | 2" HDPE perf pipe in stone trench | 420 | lf | 45.00 | 18,900 | | |
| 191 | SUBTOTAL | | | | | 156,150 | |
| 192 | | | | | | | |
| 193 | <u>East courtyard lower level</u> | | | | | | |
| 194 | SUBTOTAL | | | | NR | - | |
| 195 | | | | | | | |
| 196 | <u>East courtyard upper level</u> | | | | | | |
| 197 | Metal planter beds | 1,500 | sf | 200.00 | 300,000 | | |
| 198 | Metal planter bed - drainage allowance | 7 | loc | 500.00 | 3,500 | | |
| 199 | Planting soil; 6" thick | 28 | cy | 65.00 | 1,820 | | |
| 200 | Scarified soil; 4" thick | 18 | cy | 25.00 | 450 | | |
| 201 | Light weight soil; 5" thick | 22 | cy | 100.00 | 2,200 | | |
| 202 | Crushed stone; 6" thick | 28 | cy | 40.00 | 1,120 | | |
| 203 | Geotextile | 3,000 | sf | 1.50 | 4,500 | | |
| 204 | Access | 1 | ls | 2,500.00 | 2,500 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

Concrete paving

gravel base; 8" thick

4" concrete paving

Precast concrete pavers

Precast concrete pavers on grade - wet set

1" Mortar setting bed

4" Cement concrete pavement

8" Gravel base

Wood stepped seating system

SUBTOTAL

Playgrounds

Poured-in-place areas

3/4" crushed stone; 12" thick

dense graded crushed stone; 6" thick

Play surface; poured rubber (2 color) Quote DD phase

Playground structures- allowance

SUBTOTAL

Site Improvements

Flag pole - quote

PV foundations - visitor side of existing field

PV foundations - west parking lot

Free standing bench north plaza east

Free standing bench south plaza

Bench- pads only

Trash

Bicycle racks

Barrier gates - double

Water fountain

Bollards - north plaza west

Bollards - north plaza west (tabled crosswalk) west

Bollards - north plaza west (tabled crosswalk) east

Bollards - south plaza

Bollards (around utility pads)

Bollards (manual retractable) Mass Ave.

School sign

School sign - foundation

Bike repair station - quote

Bicycle racks - bike repair area

Memorial bench

SUBTOTAL

Fencing & handrails

8' fence - steel picket

8' gate, single (steel picket)

8' fence - steel picket

8' gate, single (steel picket)

8' gate, double (steel picket)

8' fence (CLF)

8' gate, single (CLF)

8' gate, double (CLF)

6' fence - steel picket

6' gate, double (steel picket)

4' fence - steel picket

4' gate, single (steel picket)

4' fence (CLF)

Double Swing Gate

Page clips - premium

Fence mow curb

Guardrail at loading dock

Handrails at loading dock stairs

Handrails at ramps

Handrails at Amphitheater

SUBTOTAL

682,444

237,466

352,300

457,080



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

Walls

Concrete segmental block wall- East Property Line

Large block wall- avg. 2' Ht.

Excavate and prepare wall base

Backfill wall - crushed stone

Concrete segmental block wall- walkway at baseball

Large block wall- avg. 2' Ht.

Excavate and prepare wall base

Backfill wall - crushed stone

Performance Wing - 2' avg.

Small block wall- avg. 2' Ht.

Wall cap

Excavate and prepare wall base

Backfill wall - crushed stone

Concrete segmental block wall- west parking lot

Large block wall- avg. 4' Ht.

Excavate and prepare wall base (wider due to larger block)

Backfill wall - crushed stone

SUBTOTAL

Concrete CIP Walls

CIP Stairs and Walls at loading dock

Stairs at loading dock

Cheek walls

CIP cheek wall footing at 6'-0" OC

Concrete wall east courtyard - 2' avg. (former SOE)

E&B for retaining wall

Formwork

Re-bar

Concrete material; 4,000 psi

Placing concrete

Concrete wall east courtyard - 17' avg. (former SOE)

E&B for retaining wall

Formwork

Re-bar

Concrete material; 4,000 psi

Placing concrete

Concrete wall amphitheater stage wall - 2' avg.

E&B for retaining wall

Formwork

Re-bar

Concrete material; 4,000 psi

Placing concrete

Concrete wall rain garden - 5' avg.

E&B for retaining wall

Formwork

Re-bar

Concrete material; 4,000 psi

Placing concrete

Concrete wall rain garden - 2.5' avg.

E&B for retaining wall

Formwork

Re-bar

Concrete material; 4,000 psi

Placing concrete

Anti-graffiti coating

Misc. Concrete foundations for site elements

E+B for foundations at site elements

SUBTOTAL

Sports Fields

Softball

Turf field- dual fiber w/thatch zone (sand/rubber infill)

Resilient underlayment

Logo allowance - 1' ht.

271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

| | | | | | | | |
|-----|---|--------|-----|-----------|---------|--|--|
| 338 | Field top stone; 2" thick (stone dust) | 753 | tn | 32.00 | 24,096 | | |
| 339 | Field base stone; 8" thick (dense grade) | 3,153 | tn | 28.00 | 88,284 | | |
| 340 | Granular fill; 6" thick | 2,353 | tn | 26.00 | 61,178 | | |
| 341 | Field Liner (impermeable) equal to durascrim 16 mil. | 77,000 | sf | 0.75 | 57,750 | | |
| 342 | Field Liner 30mil. - per comments | 14,000 | sf | 1.20 | 16,800 | | |
| 343 | Geotextile- per comments | 14,000 | sf | 0.75 | 10,500 | | |
| 344 | Field slot drainage system and turf anchor | 810 | lf | 180.00 | 145,800 | | |
| 345 | Turf anchor without drain | 420 | lf | 100.00 | 42,000 | | |
| 346 | Trench drain basin | 7 | loc | 1,500.00 | 10,500 | | |
| 347 | Turf drain basin | 11 | loc | 1,200.00 | 13,200 | | |
| 348 | Manhole | 1 | loc | 4,000.00 | 4,000 | | |
| 349 | Chamber system type B (262 lf) | 4,100 | sf | | | | |
| 350 | Field chambers (includes e/b) | 2,714 | ea | 45.00 | 122,130 | | |
| 351 | Double washed drainage stone (19.85 cuft/ft) chamber void removed | 317 | tn | 55.00 | 17,435 | | |
| 352 | Chamber system type A (360 lf) | 5,300 | sf | | | | |
| 353 | Field chambers (includes e/b) | 1,860 | ea | 45.00 | 83,700 | | |
| 354 | Double washed drainage stone (16.5 cuft/ft) chamber void removed | 363 | tn | 55.00 | 19,965 | | |
| 355 | 12" HDPE | 170 | lf | 65.00 | 11,050 | | |
| 356 | 15" PVC | 30 | lf | 75.00 | 2,250 | | |
| 357 | 10" PVC | 30 | lf | 55.00 | 1,650 | | |
| 358 | 8" PVC | 143 | lf | 40.00 | 5,720 | | |
| 359 | 6" PVC | 20 | lf | 40.00 | 800 | | |
| 360 | 4" PVC | 20 | lf | 40.00 | 800 | | |
| 361 | Tractor | 1 | ls | 15,000.00 | 15,000 | | |
| 362 | Field maintenance equipment | 1 | ls | 5,000.00 | 5,000 | | |
| 363 | Field safety testing suite (FIFA etc.) | 1 | ls | 10,000.00 | 10,000 | | |
| 364 | Turf bases | 1 | set | 2,500.00 | 2,500 | | |
| 365 | Backstop- 6" posts | 1 | loc | 50,000.00 | 50,000 | | |
| 366 | Scoreboard - incl repairs to liner | 1 | loc | 45,000.00 | 45,000 | | |
| 367 | Vinyl CL 8' fence - 99" | 230 | lf | 85.00 | 19,550 | | |
| 368 | Vinyl CL 8' fence - 75" shot put - no fence guard | 125 | lf | 85.00 | 10,625 | | |
| 369 | Vinyl CL Fencing- 51" double gate | 1 | loc | 1,200.00 | 1,200 | | |
| 370 | Vinyl CL Fencing- 51" single gate | 10 | loc | 850.00 | 8,500 | | |
| 371 | Vinyl CL Fencing - 51" | 969 | lf | 55.00 | 53,295 | | |
| 372 | Fence guard | 1,199 | lf | 6.50 | 7,794 | | |
| 373 | Page clips - premium | 1,324 | lf | 15.00 | 19,860 | | |
| 374 | 45' rolling gate | 1 | ea | 35,000.00 | 35,000 | | |
| 375 | Sports netting 30' | 160 | lf | 200.00 | 32,000 | | |
| 376 | Sports netting 30' -custom | 40 | lf | 225.00 | 9,000 | | |
| 377 | Allowance for sonotubes/steel at field netting | 1 | ls | 25,000.00 | 25,000 | | |
| 378 | Bullpen - fortified infield mix | 1 | loc | 10,000.00 | 10,000 | | |
| 379 | Dugouts concrete pads - no roof | 600 | sf | 20.00 | 12,000 | | |
| 380 | On deck area - assumed synthetic turf | 225 | sf | 15.00 | 3,375 | | |
| 381 | 8' Team benches - allow | 4 | ea | 2,000.00 | 8,000 | | |
| 382 | Removable pitcher's rubber | 1 | loc | 3,500.00 | 3,500 | | |
| 383 | Foul poles | 2 | ea | 5,000.00 | 10,000 | | |
| 384 | Foul poles - turf access kit | 1 | ea | 1,200.00 | 1,200 | | |
| 385 | Football goalpost east end only | 1 | loc | 12,000.00 | 12,000 | | |
| 386 | Discus | 1 | ls | 20,000.00 | 20,000 | | |
| 387 | Shotput - includes landing area/curb | 1 | ls | 35,000.00 | 35,000 | | |
| 388 | Shotput cage | 1 | ls | 20,000.00 | 20,000 | | |
| 389 | Baseball | 97,300 | sf | | | | |
| 390 | Turf field- dual fiber w/thatch zone (sand/rubber infill) | 97,300 | sf | 4.85 | 471,905 | | |
| 391 | Resilient underlayment | 97,300 | sf | 1.50 | 145,950 | | |
| 392 | Logo allowance - 16' Ht. | 1 | ls | 15,000.00 | 15,000 | | |
| 393 | Field top stone; 2" thick (stone dust) | 951 | tn | 32.00 | 30,432 | | |
| 394 | Field base stone; 8" thick (dense grade) | 3,984 | tn | 28.00 | 111,552 | | |
| 395 | Granular fill; 6" thick | 2,973 | tn | 26.00 | 77,298 | | |
| 396 | Field Liner (impermeable) equal to durascrim 16 mil. | 97,300 | sf | 0.75 | 72,975 | | |
| 397 | Field Liner 30mil. - per comments | 20,000 | sf | 1.20 | 24,000 | | |
| 398 | Geotextile- per comments | 20,000 | sf | 0.75 | 15,000 | | |
| 399 | Field slot drainage system and turf anchor | 950 | lf | 180.00 | 171,000 | | |
| 400 | Turf anchor without drain | 312 | lf | 100.00 | 31,200 | | |
| 401 | Trench drain basin | 11 | loc | 1,500.00 | 16,500 | | |
| 402 | Turf drain basin | 14 | loc | 1,200.00 | 16,800 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

| | | | | | | | |
|-----|---|--------|-----|-----------|---------|-----------|--|
| 403 | Manhole | 1 | loc | 4,000.00 | 4,000 | | |
| 404 | MWRA access area | 1 | ea | 10,000.00 | 10,000 | | |
| 405 | Chamber system type B (712 lf) | 10,200 | sf | | | | |
| 406 | Field chambers (includes e/b) | 6,975 | ea | 45.00 | 313,875 | | |
| 407 | Double washed drainage stone (19.85 cuft/ft) chamber void removed | 863 | tn | 55.00 | 47,465 | | |
| 408 | 12" HDPE | 230 | lf | 65.00 | 14,950 | | |
| 409 | 15" PVC | 20 | lf | 75.00 | 1,500 | | |
| 410 | 10" PVC | 80 | lf | 55.00 | 4,400 | | |
| 411 | 8" PVC | 143 | lf | 40.00 | 5,720 | | |
| 412 | Turf bases | 1 | set | 2,500.00 | 2,500 | | |
| 413 | Soccer goals (movable) | 1 | pr | 13,800.00 | 13,800 | | |
| 414 | Soccer corner flags | 1 | set | 1,500.00 | 1,500 | | |
| 415 | Portable pitcher's mound | 1 | loc | 30,000.00 | 30,000 | | |
| 416 | Backstop | 1 | loc | 50,000.00 | 50,000 | | |
| 417 | Backstop 4' padding | 152 | lf | 125.00 | 19,000 | | |
| 418 | Dugouts concrete pads - no roof | 600 | sf | 20.00 | 12,000 | | |
| 419 | 8' Team benches - allow | 4 | ea | 2,000.00 | 8,000 | | |
| 420 | Bullpen - fortified infield mix | 1 | loc | 10,000.00 | 10,000 | | |
| 421 | Vinyl CL Fencing 51" | 360 | lf | 55.00 | 19,800 | | |
| 422 | Vinyl CL Fencing- 51" double gate | 1 | loc | 1,200.00 | 1,200 | | |
| 423 | Vinyl CL Fencing- 51" single gate | 4 | loc | 850.00 | 3,400 | | |
| 424 | Vinyl CL 8' fence- 99" | 530 | lf | 85.00 | 45,050 | | |
| 425 | Vinyl CL Fencing 12' | 400 | lf | 125.00 | 50,000 | | |
| 426 | Vinyl CL Fencing 12' corner posts | 4 | loc | 800.00 | 3,200 | | |
| 427 | Page clips - premium | 1,290 | lf | 15.00 | 19,350 | | |
| 428 | Fence guard | 1,290 | lf | 6.50 | 8,385 | | |
| 429 | Sports netting 30' | 320 | lf | 200.00 | 64,000 | | |
| 430 | Sports netting 30' -custom | 150 | lf | 225.00 | 33,750 | | |
| 431 | Allowance for sonotubes/steel at field netting | 1 | ls | 25,000.00 | 25,000 | | |
| 432 | Foul poles | 2 | ea | 5,000.00 | 10,000 | | |
| 433 | Foul poles - turf access kit | 2 | ea | 1,200.00 | 2,400 | | |
| 434 | Scoreboard | 1 | loc | 65,000.00 | 65,000 | | |
| 435 | Allowance for sonotubes/steel at field fencing (18" Dia.) | 1 | ls | 15,000.00 | 15,000 | | |
| 436 | SUBTOTAL | | | | | 3,831,814 | |

Landscaping

| | | | | | | | |
|-----|--|--------|----|-----------|--------|--|--|
| 439 | Soil amend existing stockpiled soil - PH2-4 (1,400cy) 4" thick | 3,110 | cy | 18.00 | 55,980 | | |
| 440 | Soil amend existing stockpiled soil - PH#1 | 590 | cy | 18.00 | 10,620 | | |
| 441 | Allowance for import of topsoil | 800 | cy | 55.00 | 44,000 | | |
| 442 | Allowance for planting soil (swell import 25%) | 1,300 | cy | 65.00 | 84,500 | | |
| 443 | Allowance for mulch | 1 | ls | 25,000.00 | 25,000 | | |
| 444 | Lawn | 45,400 | sf | 0.35 | 15,890 | | |
| 445 | Lawn - slope | 4,200 | sf | 0.35 | 1,470 | | |
| 446 | Athletic mix (2,000cy) 8" thick | 80,000 | sf | 0.55 | 44,000 | | |
| 447 | Allowance for under drains not shown | 1 | ls | 60,000.00 | 60,000 | | |
| 448 | Woodland mix | 3,200 | sf | 0.50 | 1,600 | | |
| 449 | Meadow mix | 39,000 | sf | 0.50 | 19,500 | | |
| 450 | Wetland mix | 6,600 | sf | 0.65 | 4,290 | | |
| 451 | Slope stabilization fabric | 11,600 | sf | 2.00 | 23,200 | | |
| 452 | Memorial in planting | 1 | ls | 4,000.00 | 4,000 | | |
| 453 | Lawn maintenance - quote | 1 | ls | 31,000.00 | NIC | | |
| 454 | Plant maintenance - quote | 1 | ls | 18,900.00 | NIC | | |
| 455 | Stone Drip Edge | 2,200 | sf | 18.00 | 39,600 | | |
| 456 | <u>Trees</u> | | | | | | |
| 457 | Arborvitae - 7-8' ht. | 35 | ea | 800.00 | 28,000 | | |
| 458 | White pines - 7-8' ht. | 5 | ea | 675.00 | 3,375 | | |
| 459 | Serviceberry - 7-8' ht. | 40 | ea | 850.00 | 34,000 | | |
| 460 | Multi-stem red maples - 8-10' ht. | 28 | ea | 1,500.00 | 42,000 | | |
| 461 | Bald cypress - 8-10' ht. | 4 | ea | 1,500.00 | 6,000 | | |
| 462 | Multi-stem birches - 10-12' ht. | 4 | ea | 1,200.00 | 4,800 | | |
| 463 | Dogwood trees- 4-5' ht. | 3 | ea | 675.00 | 2,025 | | |
| 464 | Witch hazels - 5-6' ht. | 33 | ea | 1,200.00 | 39,600 | | |
| 465 | Signature tree planting - 8" single stem | 4 | ea | 5,000.00 | 20,000 | | |
| 466 | Shade tree - 3"-3.5" | 23 | ea | 1,800.00 | 41,400 | | |
| 467 | Shade tree - 2"-2.5" | 69 | ea | 1,100.00 | 75,900 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

| | | | | | | | |
|-----|---|---------|-----|-----------|---------|-----------|--|
| 468 | Tree guy wires with deadmen - signature trees | 4 | ea | 500.00 | 2,000 | | |
| 469 | <u>Shrubs</u> | | | | | | |
| 470 | #3 size plants | 303 | ea | 45.00 | 13,635 | | |
| 471 | #5 size plants | 214 | ea | 58.50 | 12,519 | | |
| 472 | <u>Perennials</u> | | | | | | |
| 473 | #1 size plants | 5,806 | ea | 18.00 | 104,508 | | |
| 474 | <u>Raingarden plugs</u> | | | | | | |
| 475 | Plugs | 19,216 | ea | 3.50 | 67,256 | | |
| 476 | <u>Raingarden plugs</u> | | | | | | |
| 477 | Groundcover | 1,500 | sf | 6.50 | 9,750 | | |
| 478 | Mulch; 3" thick | 18 | cy | 50.00 | 900 | | |
| 479 | <u>Irrigation systems</u> | | | | | | |
| 480 | Irrigation system | 103,755 | sf | 1.25 | 129,694 | | |
| 481 | Tree rings | 110 | loc | 1,200.00 | 132,000 | | |
| 482 | Sleeves | 580 | lf | 10.00 | 5,800 | | |
| 483 | Courtyard planters | 1 | ls | 25,000.00 | 25,000 | | |
| 484 | SUBTOTAL | | | | | 1,233,812 | |

G30 CIVIL MECHANICAL UTILITIES

ENABLING UTILITIES

| | | | | | | | |
|-----|--|--------|-----|-----------|-----------|---|--|
| 489 | Reroute existing 8" water service in conflict with proposed building footprint | 566 | lf | 160.00 | w/ EBP#2 | | |
| 490 | Hydrant | 1 | loc | 4,000.00 | w/ EBP#2 | | |
| 491 | Connect to existing | 1 | loc | 10,000.00 | w/ EBP#2 | | |
| 492 | SOE at relocated culvert | 660 | lf | | | | |
| 493 | Excavation; for utility work | | | | See Below | | |
| 494 | SP and lagging | 35,000 | sf | 70.00 | w/ EBP#2 | | |
| 495 | Whalers - included above | | | | | | |
| 496 | Premium for rock excavation | 400 | cy | 300.00 | w/ EBP#2 | | |
| 497 | Backfill to elev +55 | 815 | cy | 35.00 | w/ EBP#2 | | |
| 498 | | | | | | | |
| 499 | Relocate existing 48" drain line in conflict with proposed building footprint; | 670 | lf | 450.00 | w/ EBP#2 | | |
| 500 | Cement Lined ductile Iron | | | | | | |
| 501 | Excavate and backfill | 7,356 | cy | 80.00 | w/ EBP#2 | | |
| 502 | Bedding | 298 | cy | 60.00 | w/ EBP#2 | | |
| 503 | Drain manholes | 6 | ea | 5,000.00 | w/ EBP#2 | | |
| 504 | Drain manholes; premium for deep manholes | 3 | ea | 15,000.00 | w/ EBP#2 | | |
| 505 | Remove existing utilities/connections | 1 | ls | 50,000.00 | w/ EBP#2 | | |
| 506 | SUBTOTAL | | | | | - | |

Excavation + Backfill Quantities included below

| | | | | | | | |
|-----|---------------------------------|-------|----|--|--|--|--|
| 509 | Trench excavation | 3,672 | cy | | | | |
| 510 | Bedding | 2,165 | cy | | | | |
| 511 | Backfill with existing material | 1,507 | cy | | | | |

Water supply; Pricing includes E&B and bedding

| | | | | | | | |
|-----|----------------------------------|-------|-----|-----------|----------|--|--|
| 514 | 8" DI piping | 170 | lf | 120.00 | 20,400 | | |
| 515 | 8" DI piping- EBP#2 | 270 | lf | 120.00 | w/ EBP#2 | | |
| 516 | 6" DI piping | 760 | lf | 90.00 | 68,400 | | |
| 517 | 6" fire service DI piping | 312 | lf | 90.00 | 28,080 | | |
| 518 | 6" fire service DI piping- EBP#2 | 44 | lf | 90.00 | w/ EBP#2 | | |
| 519 | 8" fire service DI piping- EBP#2 | 120 | lf | 120.00 | w/ EBP#2 | | |
| 520 | 3" copper piping | 45 | lf | 65.00 | 2,925 | | |
| 521 | 4" DI piping- EBP#2 | 40 | lf | 75.00 | w/ EBP#2 | | |
| 522 | Thrust Blocks | 10 | ea | 500.00 | 5,000 | | |
| 523 | Connect to existing | 2 | loc | 15,000.00 | 30,000 | | |
| 524 | Connect to previous phase | 3 | loc | 5,000.00 | 15,000 | | |
| 525 | Temp Connect to Exist | 1 | loc | 5,000.00 | 5,000 | | |
| 526 | Connect to existing- EBP#2 | 4 | loc | 15,000.00 | w/ EBP#2 | | |
| 527 | Pressure testing & chlorinate | 1,287 | lf | 5.00 | 6,435 | | |
| 528 | FD connection | 1 | ea | 2,000.00 | 2,000 | | |
| 529 | FD connection- EBP#2 | 1 | ea | 2,000.00 | w/ EBP#2 | | |
| 530 | 8" Gate valves | 4 | ea | 1,200.00 | 4,800 | | |
| 531 | 8" Gate valves- EBP#2 | 3 | ea | 1,200.00 | w/ EBP#2 | | |
| 532 | 6" Gate valves | 7 | ea | 750.00 | 5,250 | | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

| | | | | | | | |
|-----|--|---|----|----------|----------|---------|--|
| 533 | 6" Gate valves- EBP#2 | 2 | ea | 750.00 | w/ EBP#2 | | |
| 534 | 4" Gate valves- EBP#2 | 1 | ea | 750.00 | w/ EBP#2 | | |
| 535 | Fire hydrant - front of school hydrant | 3 | ea | 6,500.00 | 19,500 | | |
| 536 | SUBTOTAL | | | | | 212,790 | |

Sanitary; Pricing includes E&B and bedding

| | | | | | | | |
|-----|--|-------|----|-----------|----------|---------|--|
| 540 | Temporary by-pass sanitary work; Phase 2-4 | 1 | ls | 50,000.00 | 50,000 | | |
| 541 | Manholes | 9 | ea | 4,000.00 | 36,000 | | |
| 542 | Manholes - doghouse | 1 | ea | 6,000.00 | 6,000 | | |
| 543 | Manholes- EBP#2 | 4 | ea | 4,000.00 | w/ EBP#2 | | |
| 544 | Grease trap - E/B only (by civil) | 1 | ea | 30,000.00 | 30,000 | | |
| 545 | 6" PVC | 1,000 | lf | 65.00 | 65,000 | | |
| 546 | 6" CI | 65 | lf | 95.00 | 6,175 | | |
| 547 | 6" PVC- EBP#2 | 200 | lf | 65.00 | w/ EBP#2 | | |
| 548 | 4" PVC- EBP#2 | 40 | lf | 45.00 | w/ EBP#2 | | |
| 549 | 4" PVC | 10 | lf | 45.00 | 450 | | |
| 550 | Pressure testing & video inspection | 1,075 | lf | 13.00 | 13,975 | | |
| 551 | Connect to existing sewer service- EBP#2 | 1 | ea | 10,000.00 | w/ EBP#2 | | |
| 552 | Connect to existing sewer culvert | 2 | ea | 20,000.00 | 40,000 | | |
| 553 | SUBTOTAL | | | | | 247,600 | |

Storm water; Pricing includes E&B and bedding

| | | | | | | | |
|-----|---|-------|-----|------------|-------------|---------|--|
| 556 | Manhole | 10 | ea | 4,000.00 | 40,000 | | |
| 557 | Manhole - 6' Dia. | 1 | loc | 6,000.00 | 6,000 | | |
| 558 | Manhole- EBP#2 | 8 | loc | 4,000.00 | w/ EBP#2 | | |
| 559 | Doghouse Manhole- EBP#2 | 1 | loc | 6,000.00 | w/ EBP#2 | | |
| 560 | AD | 11 | ea | 2,500.00 | 27,500 | | |
| 561 | OCS | 2 | loc | 8,000.00 | 16,000 | | |
| 562 | WQS | 1 | loc | 12,000.00 | 12,000 | | |
| 563 | WQI | 5 | ea | 8,000.00 | 40,000 | | |
| 564 | Catch basins | 5 | loc | 3,800.00 | 19,000 | | |
| 565 | Cleanout | 3 | ea | 850.00 | 2,550 | | |
| 566 | Catch basins- EBP#2 | 2 | loc | 3,800.00 | w/ EBP#2 | | |
| 567 | Convert CB to DMH | 2 | loc | 1,500.00 | 3,000 | | |
| 568 | Area drains- EBP#2 | 5 | loc | 2,500.00 | w/ EBP#2 | | |
| 569 | FES | 5 | ea | 1,500.00 | 7,500 | | |
| 570 | 30" HDPE | 391 | lf | 110.00 | 43,010 | | |
| 571 | 24" HDPE | 174 | lf | 80.00 | 13,920 | | |
| 572 | 18" HDPE | 5 | lf | 75.00 | 375 | | |
| 573 | 15" HDPE | 25 | lf | 73.00 | 1,825 | | |
| 574 | 12" HDPE | 1,233 | lf | 70.00 | 86,310 | | |
| 575 | 12" PVC | 42 | lf | 80.00 | 3,360 | | |
| 576 | 12" HDPE- EBP#2 | 760 | lf | 70.00 | w/ EBP#2 | | |
| 577 | 8" HDPE- EBP#2 | 133 | lf | 35.00 | w/ EBP#2 | | |
| 578 | 8" HDPE | 233 | lf | 35.00 | 8,155 | | |
| 579 | Temp 8" HDPE | 67 | lf | 35.00 | 2,345 | | |
| 580 | Temp Swale | 25 | lf | 20.00 | 500 | | |
| 581 | 8" PVC | 50 | lf | 40.00 | 2,000 | | |
| 582 | 6" HDPE- EBP#2 | 230 | lf | 30.00 | w/ EBP#2 | | |
| 583 | 6" PVC | 672 | lf | 30.00 | 20,160 | | |
| 584 | 4" PVC | 100 | lf | 30.00 | 3,000 | | |
| 585 | Clean proposed drainage lines & video inspection | 3,017 | lf | 7.00 | 21,119 | | |
| 586 | 28 Unit UDS | 1,200 | sf | 40.00 | 48,000 | | |
| 587 | Site trench drain at stage in amphitheater - L6.2 | 15 | lf | 180.00 | 2,700 | | |
| 588 | Trench drain - loading dock | 40 | lf | 140.00 | 5,600 | | |
| 589 | Connection to existing | 6 | loc | 5,000.00 | 30,000 | | |
| 590 | Raingarden -shaping | 1,299 | sf | 40.00 | 51,960 | | |
| 591 | Roof Drain | 153 | lf | 30.00 | 4,590 | | |
| 592 | Wall Drain | 266 | lf | 30.00 | 7,980 | | |
| 593 | RipRap Spill Ways | 311 | sf | 25.00 | 7,775 | | |
| 594 | Patching and rework structures | 1 | ls | 50,000.00 | 50,000 | | |
| 595 | Temporary earth shoring | 1 | ls | 150,000.00 | w/ EBP#2 | | |
| 596 | Perforated wall pipe - not shown allowance | 1 | ls | 80,000.00 | Incl. above | | |
| 597 | Gas service | | | | | | |
| 598 | E&B trench for new gas pipe- EBP#2 | 140 | lf | 25.00 | w/ EBP#2 | | |
| 599 | SUBTOTAL | | | | | 588,234 | |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|
|-------------|-------------|-----|------|--------------|---------------|--------------|---------------|

SITEWORK

G40 ELECTRICAL UTILITIES

Civil

Concrete:

| | | | | |
|---|-----|----|-----------|---------|
| Primary DB | 50 | lf | 18.00 | 900 |
| Secondary DB | 100 | lf | 25.00 | 2,500 |
| Generator DB | 350 | lf | 20.00 | 7,000 |
| Telecom DB | 50 | lf | 28.00 | 1,400 |
| Sports lighting controller DB | 400 | lf | 25.00 | 10,000 |
| Primary switch, Transformer & Generator pad | 4 | ea | 2,500.00 | 10,000 |
| Switchboard pad | 3 | ea | 2,500.00 | 7,500 |
| Site lighting Pole base | 65 | ea | 750.00 | 48,750 |
| Site lighting Bollard base | 19 | ea | 350.00 | 6,650 |
| Sports light Pole base, extra deep, environment sensitive | 11 | ea | 15,000.00 | 165,000 |
| EV station base | 10 | ea | 350.00 | 3,500 |

Lighting, security & EV, etc.

Earlier bid package

ETR

Excavation and backfill:

| | | | | |
|---|-----|----|-------|--------|
| Primary DB | 50 | lf | 25.00 | 1,250 |
| Secondary DB | 100 | lf | 30.00 | 3,000 |
| Generator DB | 350 | lf | 25.00 | 8,750 |
| Telecom DB | 50 | lf | 25.00 | 1,250 |
| Sports lighting controller DB, allow (assumes at toilet building) | 400 | lf | 25.00 | 10,000 |

Lighting, security & EV, irrigation circuitry

Earlier bid package

ETR

Power

| | | | | |
|--|-----|----|----------|------------|
| Primary duct bank 4-5" conduits - BP2 | 450 | lf | | ETR |
| Manhole, power BP2 | 4 | ea | | ETR |
| Connection to stubbed BP2 primary | 1 | ls | 1,000.00 | 1,000 |
| Primary duct bank 4-5" conduits - extension from BP2 stub to Utility Co Switch | 50 | lf | 80.00 | 4,000 |
| Primary duct bank 2-5" conduits Utility Co Switch to Transformers | 70 | lf | 40.00 | 2,800 |
| Primary switch | 1 | ea | | By Utility |
| Pad mount transformer | 2 | ea | | By Utility |
| Primary switch pad | 1 | ea | | See Civil |
| Pad mount transformer pad | 2 | ea | | See Civil |
| Handhole (EV charging stations) BP2, allow | 2 | ea | 1,500.00 | 3,000 |
| Secondary duct bank 3000A (Total of 2 runs) | 100 | lf | 660.00 | 66,000 |
| Generator ductbank | | | | - |
| 3000A feed | 350 | lf | 620.00 | 217,000 |
| 2500A feed | 350 | lf | 500.00 | 175,000 |
| 800A feed | 350 | lf | 180.00 | 63,000 |
| 400A feed | 350 | lf | 90.00 | 31,500 |
| 225A feed to FP | 380 | lf | 50.00 | 19,000 |
| Control wiring | 350 | lf | 10.00 | 3,500 |
| Generator pad | 1 | ea | | See Civil |

Communication

| | | | | |
|--|-----|----|----------|-------|
| Manhole, BP2 | 3 | ea | | ETR |
| Communications duct bank 4-4" conduits BP2 | 230 | lf | | ETR |
| Connection to existing stub | 1 | ea | 1,500.00 | 1,500 |
| Communications duct bank 4-4" conduits BP2 stub to building entrance | 50 | lf | 80.00 | 4,000 |

See Electrical for interior portion of communication conduits.

Sports lighting

| | | | | |
|---|-----|----|-----------|-----------|
| Sports lighting controller | 2 | ea | 10,000.00 | 20,000 |
| Sports lighting controller | 1 | ea | | ETR |
| Lighting controller 225A AL feeder 2 runs | 800 | ea | 40.00 | 32,000 |
| SP1 (Sports field fixture) | 11 | ea | 65,000.00 | Alternat |
| Sports light Pole base | 11 | ea | | See Civil |

Athletic Scoreboard

| | | | | |
|--|-------|-----|-------|-----------|
| Athletic scoreboard | 2 | loc | | See Above |
| Power to scoreboard from Toilet Building (allow) | 1,100 | lf | 12.00 | 13,200 |

Amphitheater

| | | | | |
|--|--|--|--|-------------------|
| Stage dimming system and lighting | | | | NIC Deleted scope |
| Installation, rough-in & 120V power to dimming equipment | | | | NIC Deleted scope |
| Audio visual equipment, installation & LV cabling, allow | | | | NIC Deleted scope |
| Audio visual rough-in and power | | | | NIC Deleted scope |



Arlington High School
Arlington, MA

10-Aug-20

90% Construction Document Estimate

| CSI CODE | DESCRIPTION | QTY | UNIT | UNIT COST | EST'D COST | SUB TOTAL | TOTAL COST |
|-----------------|---|-------|------|--------------|---------------|--------------|---------------------|
| SITEWORK | | | | | | | |
| 663 | Misc. Electrical provision | 1 | ls | 32,000.00 | 32,000 | | |
| 664 | <u>Site Security (allow)</u> | | | | | | |
| 665 | Site Security (allow) | 1 | ls | 100,000.00 | 100,000 | | |
| 666 | <u>Site Demolition</u> | | | | - | | |
| 667 | Demolition and make safe | 1 | ls | 25,000.00 | 25,000 | | |
| 668 | <u>Site lighting</u> | | | | - | | |
| 669 | PTO1-2 (28' pole single head) | 9 | ea | 3,721.00 | 33,489 | | |
| 670 | PTO1-23 (28' pole double head) | 3 | ea | 5,525.00 | 16,575 | | |
| 671 | PTO2-2 (14' pole single head) | 42 | ea | 2,805.00 | 117,810 | | |
| 672 | PTO2-23 (14' pole single head) | 4 | ea | 3,721.00 | 14,884 | | |
| 673 | PTO2-3 (14' pole single head) | 2 | ea | 2,805.00 | 5,610 | | |
| 674 | PTO2-4 (14' pole single head) | 4 | ea | 2,805.00 | 11,220 | | |
| 675 | PTO3 (18' pole 4 head) | 19 | ea | 4,175.00 | 79,325 | | |
| 676 | RG01 (flagpole spot) | 2 | ea | 1,599.00 | 3,198 | | |
| 677 | RG14 | 14 | ea | 2,600.00 | 36,400 | | |
| 678 | SW09 | 18 | ea | 2,200.00 | 39,600 | | |
| 679 | Handhole, new | 67 | ea | 850.00 | 56,950 | | |
| 680 | Handhole, installed in earlier bid package | 6 | ea | | ETR | | |
| 681 | Concrete Base | 83 | ea | | See Civil | | |
| 682 | Base grounding | 83 | ea | 150.00 | 12,450 | | |
| 683 | Conduit for circuitry installed in earlier bid package | 1,100 | lf | | ETR | | |
| 684 | Circuitry installed in existing conduit | 3,440 | lf | 7.00 | 24,080 | | |
| 685 | Conduit & circuitry | 6,150 | lf | 10.00 | 61,500 | | |
| 686 | EV charging station | 10 | ea | 9,000.00 | 90,000 | | |
| 687 | Station base | 10 | ea | | See Civil | | |
| 688 | Conduit & circuitry | 700 | lf | 9.00 | 6,300 | | |
| 689 | <u>Traffic Signals</u> | | | | | | |
| 690 | Traffic light at Mill Street | | | | See Add Alt | | |
| 691 | | | | | | | |
| 692 | BLEACHER MOUNTED PVS | | | | | | |
| 693 | Remove bleacher seats; foundations to remain | | | | NIC | | |
| 694 | Install new PV panels | | | | By Others | | |
| 695 | Electrical conduit for PV panels 2-2", empty, run along with sportsfield lighting | 600 | lf | | See Add Alt | | |
| 696 | Handhole | 5 | ea | | See Add Alt | | |
| 697 | Footings for PV panels; modify existing | | | | NIC | | |
| 698 | Structural System to mount PV panels; attached to existing bleachers footings | | | | By Others | | |
| 699 | | | | | | | |
| 700 | PARKING LOT PVS | | | | | | |
| 701 | Electrical conduit for PV panels | | | | ETR | | |
| 702 | Circuitry | | | | By Others | | |
| 703 | Install new PV panels | | | | By Others | | |
| 704 | Structural System to mount PV panels | | | | By Others | | |
| 705 | Footings for PV panels | | | | By Others | | |
| 706 | SUBTOTAL | | | | | \$1,710,341 | |
| 707 | | | | | | | |
| 708 | TOTAL - SITE DEVELOPMENT | | | | | | \$15,978,230 |

| Arlington High School | | | | | | | |
|------------------------------------|---------------|--------------------|--|--|------------------|-----------|---|
| Alternate List DRAFT | | | | | | | |
| Consigli 90% CD Estimate 8/17/2020 | | | | | | | |
| Temp Designation | | Phase of Work | Items | Filed Sub Bid Y/N | 90% CD Costs TBD | w mark up | Notes |
| A | Design | Phase 1 | Exterior CMU patterning/varied sizes at Amphitheater courtyard | Yes - masonry | 6,500 | 7,173 | |
| B.1 or | Design | Phase 2 | Exterior CMU - horizontal banding at Preschool | Yes - masonry | 70,483 | 77,781 | |
| B.2 or | Design | Phase 2 | Exterior CMU - wave pattern at Preschool | Yes - masonry | 82,696 | 91,258 | |
| B.3 | Design | Phase 2 | Exterior CMU - change all to 4x16 at Preschool | Yes - masonry | 124,812 | 137,735 | |
| C.1 | Sustainabilty | Phase 2 | Triple pane glazing at North CW @spine | Yes - CW | 30,002 | 33,108 | |
| C.2 | Sustainabilty | Phase 2 | Triple pane glazing at East CW @spine | Yes - CW | 98,220 | 108,390 | |
| C.3 | Sustainabilty | Phase 1 | Triple pane glazing at South CW @spine | Yes - CW | 64,360 | 71,024 | |
| D.1 | Design | Phase 1 | Change second floor central spine flooring from polished-stained concrete to terrazzo | Yes - epoxy terrazzo | 262,660 | 289,855 | Currently an Alternate |
| D.2 | Design | Phase 2 | Change first floor central spine flooring from polished-stained concrete to terrazzo | Yes - epoxy terrazzo | 115,570 | 127,536 | |
| E | Sustainabilty | Phase 4 | Conduit for PV to be installed at north bleachers | Yes - electrical | 59,500 | 65,661 | Currently an Alternate |
| F | Design | Phases 1, 2, 3 | Increase corridor wall tile height from 5'-0" to 7'-0" | Yes - tile | 290,640 | 320,732 | |
| G | Site | Phase 4 | Sports field lighting poles, lights, & wiring | Yes - electrical | 1,110,000 | 1,224,928 | Currently an Alternate |
| H | Site | Phase 4 | Traffic light at Mill Street | Yes - electrical | 350,000 | 386,238 | Currently an Alternate |
| | | | | | | 0 | |
| | | | | | | 0 | |
| a | Design | Phase 1 | Add wood paneling at Main Lobby at Auditorium & Black Box | No | 104,910 | 115,772 | |
| b | Design | Phase 2 | Change fixed glass wall to include a portion of glass folding wall at Central Spine to Courtyard | No | 24,453 | 26,985 | Revised Alternate |
| c | Sustainabilty | Phase 1, 3 | Additional insulation at exterior walls of Athletics & Perf Arts wings | No | 250,110 | 276,006 | |
| d | Site | Phase 4 | Baseball & softball batting cages | No | 94,300 | 104,064 | Currently an Alternate |
| e | Site | Phase 4 | MM Bikeway connector ramp | No (move lights & handrail to future Change Order) | 602,324 | 664,688 | Currently an Alternate |
| f | Site | Phase 4 | Baseball & softball warm up bullpens | No | 27,990 | 30,888 | Currently an Alternate; 2 <u>additional</u> bull pens |
| g | Site | Phase 4 | Sports field Maroon Monster | No | 56,000 | 61,798 | Currently an Alternate |
| h | Site | Phase 1 | Deduct for irrigation at south lawn | No | -73,800 | -81,441 | Currently in the 90% estimate |
| i | Site | Phase 4 | Deduct irrigation at grass areas around sports fields | No | -144,000 | -158,910 | Currently in the 90% estimate |
| x | Sustainabilty | Phase 1 <i>now</i> | PV installed over RTUs at Perf Arts roof only | Add via Change Order to structural steel | 83,200 | 91,814 | Formerly an Alternate |

| ITEM | ADD LATER | ADD ALT | Status | No Objection | Rejected | Pending |
|---|--------------|------------|----------|--------------|-------------|---------|
| LOGISTICS/SEQUENCING/PHASING | | | | | | |
| combine phases 3 & 4, shorten overall schedule, reduce GCs, reduce escalation, reduce phasing; school w/o Gym & PE lockers for 1 school year | | | Rejected | | (620,000) | |
| | | | | | | |
| SITE | | | | | | |
| replace artificial turf w natural (add in irrigation) | Y | ALT | Rejected | | (1,597,462) | |
| provide conduit only to sports lighting, eliminate lights, poles, footings | Y | ALT | Rejected | | (240,000) | |
| eliminate amphitheater (incl aisles, 6" granite curb edging, ramp & railing, reinforced lawn, and platform; grass only) | | | Rejected | | (158,914) | |
| eliminate all irrigation | | | Rejected | | (171,750) | |
| | | | | | | |
| EXTERIOR | | | | | | |
| change brick to CMU -version 1B | | | Rejected | | (170,658) | |
| | | | | | | |
| INTERIOR | | | | | | |
| eliminate catwalk at Blackbox | | | Rejected | | (94,200) | |
| reduce Auditorium AV scope by an additional 5% | | | Rejected | | (13,500) | |
| reduce overall building square footage thru the spine (reduce program spaces sizes, incl cafeteria, library, Dlab (reduce seats by ~25), Smart Lab, & Language Lab) | | | Rejected | | (407,193) | |
| reduce size of Black Box by 500 sf (new size: 2,500 sf) | | | Rejected | | (19,047) | |
| reduce size of Black Box by 1000 sf (new size: 2,000 sf) | | | Rejected | | 0 | |
| tile on wet walls only in shared/student toilet rooms | | | Rejected | | (238,477) | |
| | | | | | | |
| SUSTAINABILITY | | | | | | |
| eliminate EV-ready at west parking lot | grant | | Rejected | | (8,143) | |
| eliminate PV at west parking lot | | | Rejected | | (74,874) | |
| | | | | | | |
| MECHANICAL | | | | | | |
| eliminate gas service to science labs | | | Rejected | | (182,809) | |
| | | | | | | |
| | | | | | | |

Arlington High School Building Committee Meeting
Tuesday, August 4, 2020
Conducted via Remote Participation
6:00 pm

Present: Jeff Thielman, School Committee Representative, Chair
Kathleen Bodie, Superintendent, Co-vice chair
Adam Chapdelaine, Town Manager, Co-vice chair
Kirsi Allison-Ampe, School Committee Representative
Francis Callahan, Community Member Representative
John Cole, Chair, Permanent Town Building Committee
Tobey Jackson, Community Member Representative
Matthew Janger, AHS Principal
Ryan Katofsky, Community Member Representative
Brett Lambert, PTBC Representative
Kate Loosian, Community Member Representative
Michael Mason APS Chief Financial Officer
William McCarthy, AHS Assistant Principal (*absent*)
Judson Pierce, Community Member
Sandy Pooler, Deputy Town Manager
Paul Raia, Disabilities Commission Representative (*absent*)
Brian Rehrig, Capital Planning Committee Member
Amy Speare, Community Member Representative
Shannon Knuth, Teacher Representative
Kent Werst, Teacher Representative

Also present: Jim Burrows, Victoria Clifford, Sy Nguyen, Skanska Inc.
Lori Cowles, Melissa Greene, Arthur Duffy, Stephanie MacNeil,
HMFH Architects, Inc.
John LaMarre, Todd McCabe, Consigli Construction

Call to order: 6:00 pm

Chair of the Committee, Jeff Thielman, opened the meeting conducted by remote participation as outlined in Governor Baker's order suspending certain provisions of the open meeting law on March 12, 2020, and explained the procedure on taking votes.

Discussion with Disabilities Commission

Paul Raia and Cynthia DeAngelis of the Disability Commission addressed the Committee relative to the building project. They would like to work with the Committee to ensure that the building is as inclusive as possible beyond ADA regulations so that incoming students with disabilities can benefit, feel welcomed and motivated.

Members of the Disability Commission will meet with the AHSBC Interiors Subcommittee to focus on accessibility points in the building and how those points will be addressed. HMFH will put together a presentation and then have a dialogue with the commission

Fusco Air Conditioning Review – Vote for Finance Sub-committee Final Approval

Jim Burrows reported that windows in the Fusco House need to be closed during construction due to noise and air quality. Air conditioners have been ordered along with electrical equipment that is needed to update the existing electrical capacity for Fusco House.

HMFH stated the capacity of the unit is to take the bite out of the temperature, Fusco has proper ventilation, and the air conditioner will control room temperature.

The air conditioner units will be turned over to the Town for whatever purpose they need them when Fusco House is ready for demolition.

On a motion by Kathleen Bodie seconded by Adam Chapdelaine it was:
Voted that the AHSBC gives authorization to the Finance Subcommittee to approve the final pricing for Fusco Air Conditioning (CR017) \$109,759. Unanimous roll call.

Builder Risk Update- Vote to fund from Owner's Contingency

Jim Burrows reported that Skanska had procured the builders risk insurance on the construction site and the insurance on the existing building. The current policy with Maya ends on the existing building once construction begins necessitating that Skanska go out to bid. Four proposals were received with Liberty Mutual coming in with the lowest price for the existing and builders risk insurance for a total of \$631,000.

Jim Burrows explained that Skanska carried \$369,000.00 in the owners soft cost contingency budget and an additional \$100,000 for a total of \$469,000 and is requesting approval of \$162,453 from the Owners Contingency to fund the premium.

On a motion by Adam Chapdelaine seconded by Kathleen Bodie it was
Voted that the AHSBC gives authorization to the Finance Subcommittee to approve funding the Builders Risk Premium in the amount of \$631,920 with \$162,453 from Owner's Contingency.
Roll call: 14 yes votes 2 no votes. Motion carries.

Jeff Thielman -yes

Kathleen Bodie -yes

Adam Chapdelaine -yes

Kirsi Allison-Ampe -yes

Francis Callahan - no

John Cole -yes

Tobey Jackson -yes

Matthew Janger -yes

Ryan Katofsky -yes

Brett Lambert - yes

Kate Loosian -yes

Michael Mason -yes

Judson Pierce no

Sandy Pooler -yes

Bran Rehrig -yes

Amy Speare -yes

Skanska Update

Review of Alternates Overview

Jim Burrows explained to the committee the process in which alternates could be chosen:

- ◆ Trade bid alternates must be ranked in order per Mass General Laws.
- ◆ Non trade alternatives- site work can be taken in any order if there is room in the budget.
- ◆ No votes are required tonight, wants the committee to be familiar with the alternate items.

HMFH Alternates Update

Lori Cowles reviewed the draft of alternates explaining the rationale behind each item.

The committee discussed at length:

- ◆ The list of alternates – sub filed bids and non-bid items
- ◆ How to prioritize them
- ◆ Timeline of when decisions are required. .

HMFH explained that we will determine what the budget is and then prioritize what we want as alternates at the mid-August meeting.

The 90% construction documents submission to MSBA must include our list of alternates in the order that the committee votes.

McPhail Site Updates

Bill Burns (LSP) of McPhail Associates reported that

- ◆ The laundry mat contamination concerns that were brought up by community members and confirmed that a laundry mat was never on site, it was across the street, and if there was any contamination from the laundry mat it would have had to travel from groundwater.
- ◆ Prior to construction we did a robust soil testing program to plan for soil removal. Soils on the front green are moderately clean soils.
- ◆ Currently, have two dust monitors systems onsite that take readings all day long. The dust data is accessible by a software that McPhail has access to and includes in their reports.
- ◆ There hasn't been a concerning amount of dust due to construction to date. Dust levels are currently low on-site.
- ◆ McPhail is on-site daily for geotechnical testing and for dust control and the contractor is also performing street sweeping and cleaning all tires of trucks before leaving site.
- ◆ Consigli went over in more detail the dust mitigation measures they are implementing onsite.
- ◆ Amy Speare will add information on contamination and dust control on the AHS FAQ.

Consigli Update

Todd McCabe and John LaMarre reported on the following:

Parmenter Monthly Update

- ◆ Eversource new service power the planned last week in June and revised to last week July did not occur. Need for State Inspection of elevator & MEP.
- ◆ Elevator construction is completed and performed on a temporary generator.
- ◆ Elevator shaft on the existing roof, the cladding panels and metal roofing were completed. Staging removed.
- ◆ Site work (asphalt, sidewalks and topsoil) has been completed.
- ◆ Town IT dept. has mobilized and installing.

Summary

- ◆ Mechanical equipment new pumps, water heater, and HVAC systems are completed. Await permanent power.
- ◆ Finishes are nearing completion; elevator surrounds and painting. Flooring and ceilings are completed.
- ◆ Construction is on schedule (Other than Eversource), protocols for furniture installation & teacher return into the building when scheduled without an elevator are being worked through with Inspectional Services Dept.
- ◆ **AHS Monthly Update**
- ◆ Executive Overview Site work (EBP #2) continues and is scheduled for the public walkway entry to be completed for the start of the school year. 09/04/20.
- ◆ EPB #3 (alt. office & new classrooms) finishes are being installed. Electrical (lighting & fire alarm) are to on line mid to late Aug. C of O on 08/29
- ◆ EPB #4 PH-1 Structural Steel & Concrete) were awarded. Submittals and material procurement is underway.
- ◆ 90% Construction Documents issued to estimators on 07/22/20 for estimate reconciliation in mid-August.
- ◆ COVID-19 protocols continue to be in place and practiced

Summary

- ◆ Enabling of the Phase 1 site continued. New Town storm line 36”/48” completed. Existing 36” off line. Existing water & sewer lines were rerouted
- ◆ Existing DPW water lines in Mass Ave. valve required replacement and was performed on off hours.
- ◆ Electric and communications “reroute” duct bank completed. Eversource has not committed to a date for pulling “rerouted” wire.
- ◆ Gas line rerouting piping mounted to existing building is completed. New gas meter scheduled with National Grid.
- ◆ Relocated fire protection services were completed.
- ◆ Drone flight – no hawks nest found in the clock tower
- ◆ Planning for the return of staff, teachers and student continues

Subcommittee Reports

- ◆ Communications – none
- ◆ Finance – No updates. Have been reviewing and approving invoices and change orders within our limits. Next meetings is on August 6th
- ◆ Interiors – to meet within the next two weeks.
- ◆ Landscape & Exteriors – met last month, Lori to present updates to brick patterning on the exterior, amphitheater design and pre-school exterior design.
- ◆ Memorials - none
- ◆ Security - none
- ◆ SMEPFP – Waiting on energy model results. New LEED score card shared with the committee shows that we are at 66 points which is a gold ranking. Working with Arlington Resident MIT Professor to reduce impact of concrete. Hired IDS for building automation consultant services.
- ◆ Temp Use-Phasing – meeting on August 6th

Approval of Minutes

On a motion by Kathleen Bodie seconded by Ryan Katofsky it was:

Voted to approve the meeting minutes of July 7, 2020, Roll Call: Unanimous

Meeting Schedule

Proposed August meetings

Added meetings for potential value engineering:

August 18, 19, 20th.

Meeting to approve MSBA 90% CD submission: August 25th

New Business

None

On a motion by Kathleen Bodie seconded by Kate Loosian it was:

Voted to adjourn at 9:00 p.m.

Roll Call: Unanimous

Submitted by:

Karen Tassone

Recording Secretary

AHS Building Committee

Ktassone@arlington.k12.ma.us